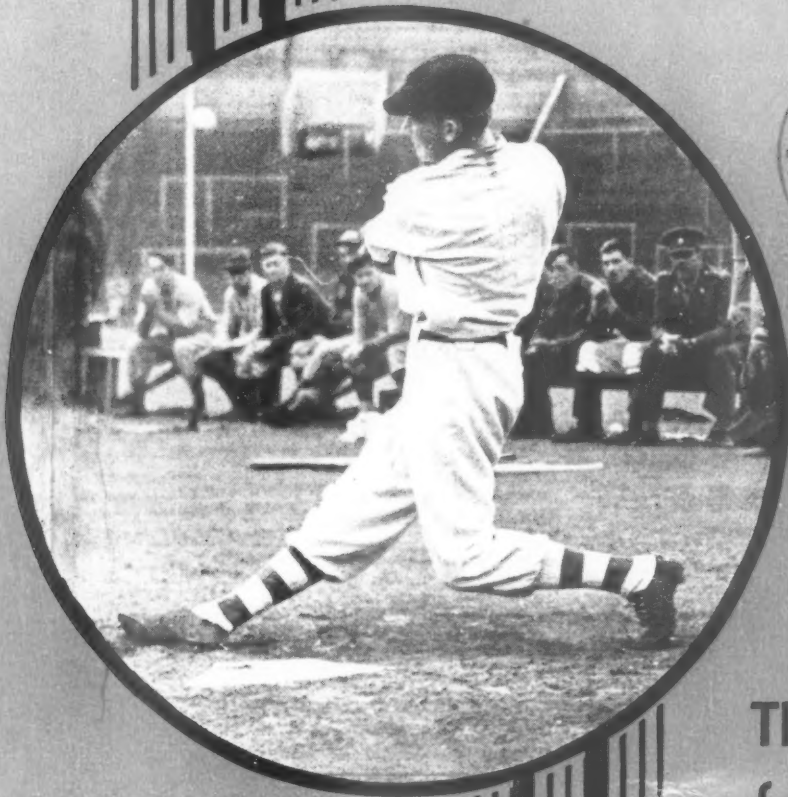


ATHLETIC JOURNAL

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The Distinguishing Aspects of the Champion Pole Vaulter

Dean B. Cromwell

Some Phases of Defensive Baseball

Carl Stockdale

Rogers Hornsby



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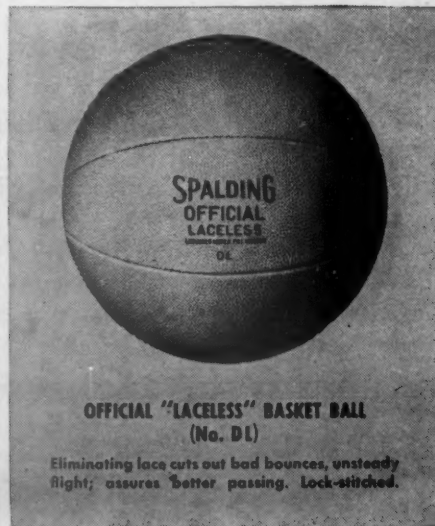
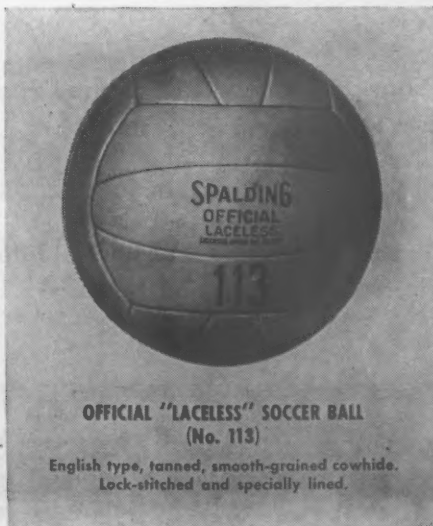
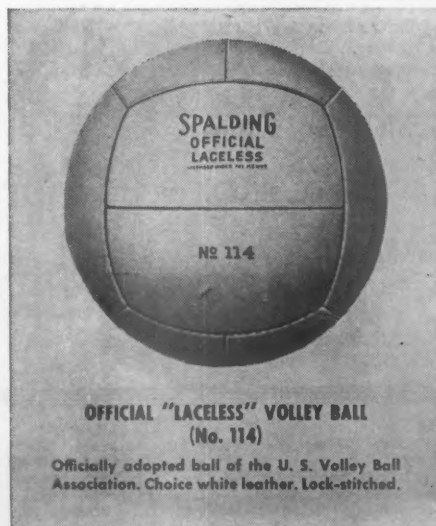
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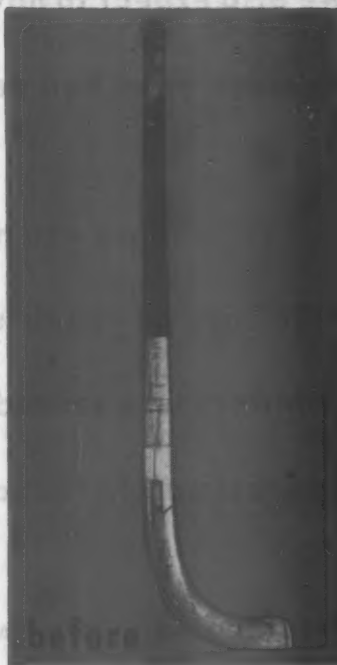
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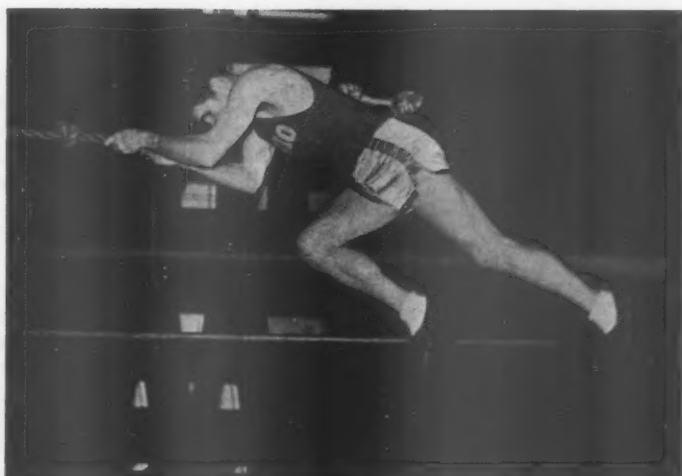


Illustration 1 shows a piece of apparatus that is handy for teaching the hitch-kick and is a great aid for pole vaulters.

Make Broad Jumping Safer

By George E. Haney
Track Coach, Ohio State University

OFTEN at track coaching clinics and in informal conversations, track coaches mention the dangers of broad jumping. Some coaches even go so far as to discourage good sprinters and hurdlers from jumping because of the frequency of injuries in the running broad-jump event.

It is the writer's conviction that broad jumping can be as safe as sprinting, and safer than hurdling, if certain training precautions are taken, and if jumping pits and runways are correctly constructed.

It is too bad that *all* sprinters and hurdlers do not learn to broad-jump, because the boys with speed and spring are precisely the ones who are best equipped for the running leap. Track history shows that practically all the world's good broad jumpers have been sprinters or hurdlers, or both, of better than average ability. Kraenzlein, Owens, Peacock, Ewell are a few examples. I believe that if a sprinter or hurdler will spend ten or fifteen minutes daily in good, basic practice of jumping fundamentals, he can prepare himself for competitive jumping so that there is no more chance of injury than there is in a 100-yard dash. We know, certainly, that there is danger in any athletic event if the competitor is not adequately prepared.

Broad jumping is one of the least developed of track and field events, in the writer's opinion. Annually, very few jumpers come within two feet of Jesse Owens' world's record of 26 feet 8¼ inches. Yet, every athlete who can run a hundred yards in ten seconds and has a normal amount of spring should jump twenty-four feet or better. The only physical handicap to prevent such a sprinter from being a good jumper is weakness in ankles, arches, or knees. As a matter of fact there have been jumpers who have bettered twenty-four feet who could not run a hundred yards in ten seconds, but who were able to generate a good burst of speed in the final fifteen or twenty yards before reaching the take-off board. I believe that if all these potential jumpers were encouraged to spend some regular

time preparing for broad jumping, we would see more twenty-five foot jumps. Too often the broad jumper is merely jumping at meets to fill in time between sprint or hurdle races.

Let us examine some of the injuries that occur in jumping. The most common, I believe, is the bruised heel. This stems from several causes, but probably most often, from the stamp at the take-off. The violent stamp does not lift the body appreciably, but merely expends itself in splintering the board. Moreover, the stamp jars the heel and entire leg of the jumper, causing shin splints as well as bruises, and destroying leg spring. Succeeding jumps will likely be worse instead of better. Height in the jump is attained by the amount of spring or push used *after* the spikes contact the board. Nothing but pain results from stamping. If the jumper will practice a smooth take-off, placing the heel on the dirt, back of the board so that his front spikes are just on the board, then rock onto his toe for the lift, he will get just as much height with more comfort. Jesse Owens jumped without any pronounced stamp, and he holds the record. Another advantage in not stamping is that the jumper will follow through better and stay more relaxed.

To prevent bruised heels, it helps to use sponge-rubber pad inside the shoe. Care should be taken that the dirt in front of the jumping board is not worn away so that the heel strikes the edge of the board.

The next most frequent jumping injury seems to be soreness of knees, ankles, and arches. This may be caused in the same way as the bruised heel, and if so the remedy is the same. Quite often, though, the soreness in arches and ankles is caused by the wrong kind of practice. In jumping events, where success depends on vigor of effort, very many such attempts cause a break-down some place. The answer is to plan the practice so that skill is developed, but keep the effort at a minimum. Many easy jumps are more beneficial than a few hard, straining ones, because it is in the easy jumps that the muscles, tendons,

and ligaments are toughened and prepared for the supreme effort, which need come only once a week. Later in this article some easy safe practice methods are suggested. A further reason for easy jumping is that, in frequent, easy jumps, the competitor develops more relaxation, confidence, balance, co-ordination.

Another type of injury occurring in the broad jump is the pulled or strained muscle. Occasionally it is in the calf, more frequently in the thigh or back. I am personally convinced that these muscle pulls are due to lack of daily use of warm-up exercises, lack of adequate practice build-up, or incorrect jumping form.

The pulls in the calf may be kept to a minimum if some easy bouncing on the toes is included in the daily warm-up, and if the running part of the warm-up includes very easy, bouncing, jogging, gradually working up to some full-speed sprints, and easy jumps, building up slowly to full-blast leaps. Most of the pulled back muscles that have come to my attention were caused by off-balance leaps in which the jumper was forced to make an unusual twist to keep his balance. This usually happens when the approach is bad, throwing the jumper off stride. Jumpers should be taught not to jump unless they reach the board correctly. If the approach is not right, the jump will not be worth taking anyway. The other back injuries seem to come from improper warm-up. There should be many back twists, front bends, and back bends in every jumper's list of warm-up exercises.

The most incapacitating of all the pulled muscles are the triceps and hamstring groups of the thigh. The triceps is the heavy mass of muscle on the front or top side of the thigh. Most injuries here occur at the start of the run, when the jumper is driving to accelerate, and at the moment of the lift from the take-off board. The prevention is two-fold: A jumper should be sure to warm up patiently with plenty of knee-bends, gradually speeded-up sprinting, and plenty of practice jumps at the edge of the pit,

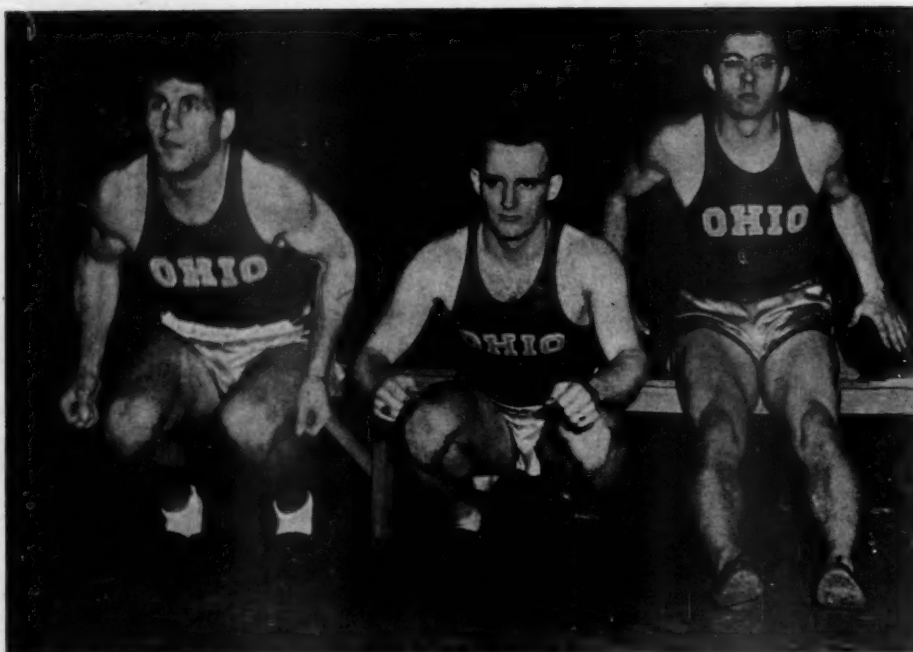


Illustration 2—The boy at the right with legs extended illustrates the position at instant of impact. The boy in the center has exerted a vigorous pull to bring his body over his feet. The boy on the left is coming on forward and will come to rest on his hands or will leap to an erect position.

starting easily and slowly building up to maximum. He should not drop too low for the jump. A study of moving pictures of good jumpers shows very little bending of the knee at the take-off. Most of the spring comes from the ankle. When a jumper is approaching the board at ten-second speed, it is asking too much for him to drop low and change such speed from forward to upward. If he merely drops to his heel, straightens his leg, and rises on his toe, he will get all the lift he can expect, with little strain on his triceps.

Every case that I have known of a pulled hamstring muscle in broad jumping occurred *before* the jump, in the few strides before the take-off. The victim is always surprised and chagrined, because he was "just running down the runway". The explanation is that, in the few strides before the take-off, a good jumper relaxes and coasts a bit to "gather" for the leap. He is sprinting at full speed, and when he changes to the striding form, he quits driving and starts pulling, which changes the emphasis from the *driving* triceps to the *pulling* hamstrings. The sudden shift often ends in a stab of pain. The problem is made worse by the fact that the jumper uses this stride position only in one event, and has not trained on the 440 or 880, where the striding form is regularly used.

There is only one remedy which I know, but to my knowledge it has never failed. I have not yet seen a hamstring pulled by a boy who, in his warm-up, and *directly* preceding his jump, did a front bend with knees straight and hands flat on the ground. Long ago I had a couple of chunky-legged sprinters who were bothered by repeated slight tears of the ham-



Illustration 3—Note the nicely balanced "gathered" position of Jesse Owens after the hitch-kick and before landing.

string muscles. I found that the boys' muscles had shortened to the point that they could not *touch* the ground with their fingers while doing a front bend. They had been doing their front bends, all right, but not well enough. We started a campaign of real front bends (knees straight!) until every squad member could get his hands flat on the ground. There were groans, and stiff joints squeaked, but we had no more pulled hamstrings. I believe this exercise to be the most important single exercise for track and field men. If the muscles are stretched far enough, it

is almost impossible for them to contract far enough to be torn.

Some safety items in connection with jumping pits may be considered. The board should be near enough to the pit so that, if a man has a poor take-off and a bad jump, he is sure of landing in the pit and not on solid ground. It is important to keep the runway in good condition so that no slippery spots or holes develop. The pit itself should be wide enough to accommodate a man who rolls when he lands. Often in the narrow type of pit, a man falls sideways and bruises his upper body on the board or concrete retaining walls. There should be no hard wall at the end of the pit, because many jumpers stumble and lunge after the landing. The pit should be long enough to provide for a 25-foot jump plus a roll. The material in the pit should be loose, but not too light. A loose sand or mixture of sand and sawdust is better than soft, light shavings, because a sprinting man running through the pit may fall headlong when his legs sink too far into a light, feathery pit. I have seen some bad spills in such pits, and a surprising number of twisted ankles. Jumpers should be told always to step into the pit and get the feel of it before running through or jumping. Spiked-heeled shoes are safer, but most champions use regular sprint shoes in competition.

In connection with jumping pits it might be well to discuss the landing. Sometimes jumpers twist or jam ankles or knees in faulty landings. In my opinion, lack of easy practice is at the root of these difficulties. A boy who takes enough easy practice jumps learns how to reach for his full distance, anticipate the jar of landing, and pull himself forward over his heels so that he lands on hands and knees in a safe, easy position. Below are some practice suggestions for teaching this type of landing. The main advantage of the "hitch-kick" type of jump, it seems to me, is the balanced position it provides, insuring a safer, face-forward landing. Side falls and rolling landings are dangerous.

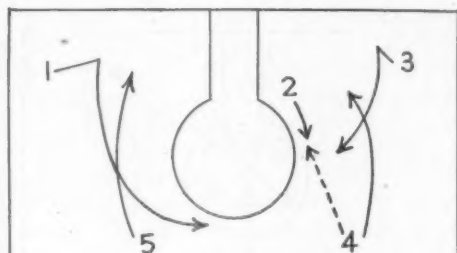
I am adding some training suggestions that I have found helpful in preparing broad jumpers for safe competition and that, at the same time, develop skill. These suggestions are for the average jumper, who is primarily a sprinter, hurdler, or quarter-miler, and does his broad jumping on the side. If a rare candidate appears with ideas of being a jump-specialist, he is encouraged to work on sprinting and hurdling to improve speed, spring, rhythmic stride, and leg strength, because mere jumping by the hour does not usually produce very good jumpers. With this sort of set-up no more than fifteen to thirty minutes a day go into the actual broad-jump training, because the warm-up work for sprinters, hurdlers, and jumpers is practically identical.

(Continued on page 28)

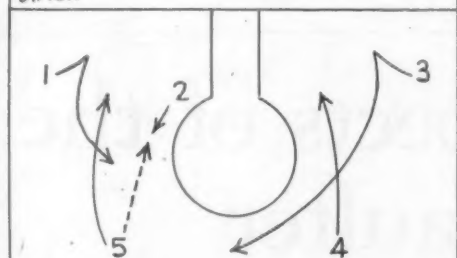
A Few Basketball Plays of the 1945 Season

By Clifford Wells

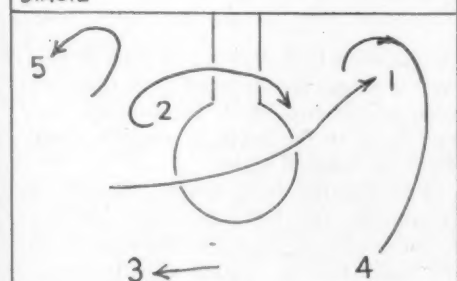
Basketball Coach, Logansport, Indiana, High School



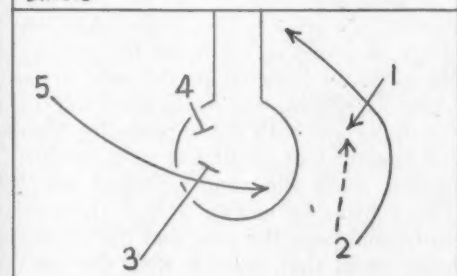
DIAG. 1



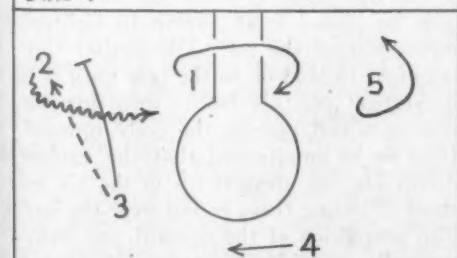
DIAG. 2



DIAG. 3



DIAG. 4



DIAG. 5

IT MAY be too late for the plays diagrammed below to be of use this year, but they will serve to give an idea of some very successful continuities, set floor plays, and out-of bounds plays used by some of the better teams which I have seen this year.

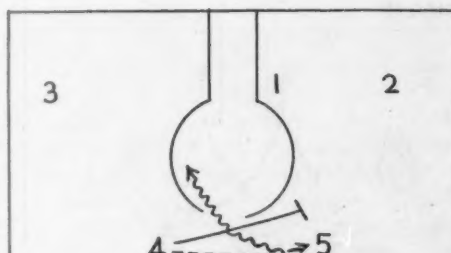
Diagram 1. One of our better Indiana high school teams used this continuity with great success. The pivot player was a fine pivot man, and the defense was generally always centered very much around the basket area. The play moved from one side of the floor to the other until a shot was taken.

If player 4 brought the ball down the floor and passed to 2, he cut for the goal, and if open, he received the return pass. As he cut, player 3 also started to cut, and with a change of direction cut back, picking his guard off of 4 and received a pass from 2 for a one-hand shot or a dribble around 2 and in for a close-in shot. If the defense all dropped back around the goal, the ball was passed out to 1 for a spot shot.

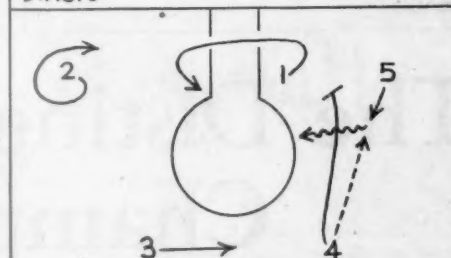
Diagram 2. The play on the other side of the court with 5 advancing the ball is shown in Diagram 2. There is always the option of 2 faking, turning, and getting a shot. Should the defense stop the play on one side, the ball and set-up moves to the other side of the front court as is shown in Diagram 3, and the continuity continues until a shot is taken.

Diagram 3. The pivot player 2 moves as is shown in the diagram around the free-throw area. The other players interchange positions in the manner as is shown in Diagrams 2 and 3. If the ball is in the possession of 5, and the play does not work out, then 5 stays on the same side of the court and goes into the corner. Player 1 who is on the side of the court where the ball is, goes over to the corner on the other side of the court. As 2 passes back out to 3, player 4 circles out of the corner and into his place as is shown in Diagram 3. If the ball is brought down the other side of the court, then the reverse would work out for players 1-3-4-5.

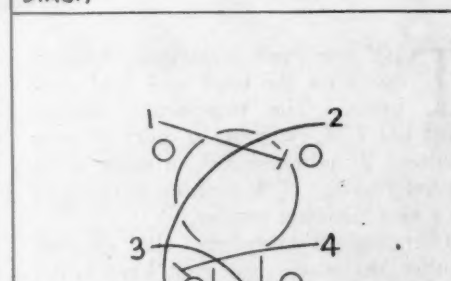
Diagram 4. In Diagram 4 is shown a set play used by a high school team that had good one-hand shooters with good tall boys with a good rebound attack. As 2 passed to 1, he cut outside and was given the ball for a one-hand shot. At the same time, 5 cuts in around a double screen for a one-hand shot if given the



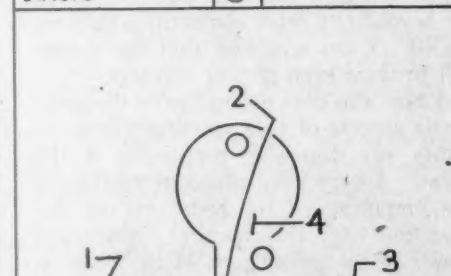
DIAG. 6



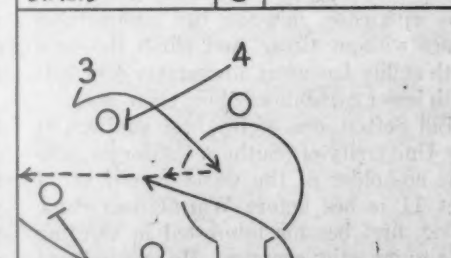
DIAG. 7



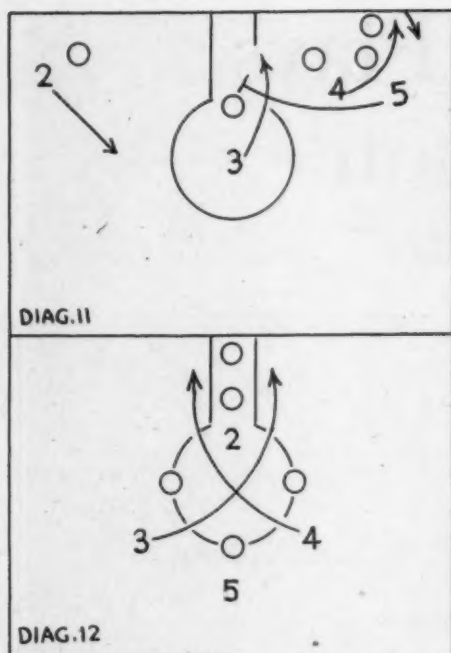
DIAG. 8



DIAG. 9



DIAG. 10

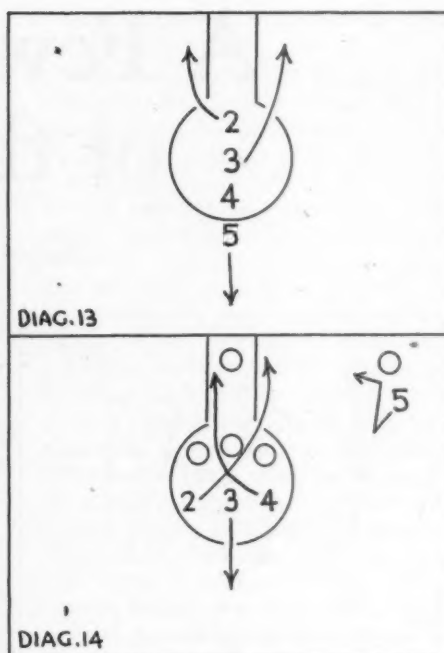


ball. If 2 or 5 took a shot, the rebounding was done by 4-3-2.

Diagram 5. In this continuity, 3 starts the play by passing to 2, and screens for 2 who drives around for a one-hand shot. If the guard on 1 is attracted, 2 passes to 1. If the guard on 4 slides back to protect the goal, then 2 passes to 4 for a good spot shot. This failing, 4 has the ball and passes to 5 as is shown.

Diagram 6. Player 5 dribbles around the screen on 4 and tries to go all the way in for a lay-up shot. If the guard on 1 is pulled away, 5 passes to 1 under the goal, or if the defense blocks the play, 5 passes to 3, and screens for 3 to drive around and in. Again 4 is in a position for a pass and shot if the defense blocks 3 driving in. This continues on the other side of the front court as is shown in Diagram 7 until a good shot can be obtained. This really gives a team a good possession game. One is the tall pivot

(Continued on page 26)



The Distinguishing Aspects of the Champion Pole Vaulter

By Dean B. Cromwell

Track Coach, University of Southern California

THE pole vault is the most complex event on the track and field program. The prospective vaulter must be: 1. A gymnast, in order to be a vaulter. 2. A precisionist, in order to be a good vaulter. 3. A sprinter, in order to be a championship vaulter.

Cornelius Warmerdam, the greatest vaulter the world has even known, developed all these aspects of vaulting to a superior degree and thus attained marks far beyond any other competition thus revealed. I am confident that the future will produce even greater vaulters.

A boy who does not recognize the gymnastic aspects of pole vaulting will never attain any degree of proficiency in the event. A very vital phase of vaulting is the propulsion of the body upward and over the bar; this requires tremendous power in the upper part of the body as greater heights are attained. Therefore, a boy who can do handstands and push-ups with ease, chin the bar innumerable times without tiring, and climb the rope with agility has great advantages over lads with lesser capabilities along these lines.

Bill Sefton, one of my best vaulters at the University of Southern California, who was co-holder of the world record at 14 feet 11 inches before Warmerdam came along, first became interested in vaulting as a gymnastics exercise. He was induced to come out for the track team in high school only incidentally, but soon devel-

oped into a champion performer. He still retained his interest in gymnastics, however, and at the university was a valued member of the gymnasium team for the rope-climb event. He was powerfully built in the shoulders, and I can assert that Bill actually cleared heights exceeding 15 feet, although, to his own disadvantage, the bar was set at low heights at the time.

Vaulters can actually practice for their event without even placing a pole in the vaulting box. At the University of Southern California, we have had a part of a bamboo pole or a heavy rope suspended from a large beam. The vaulter stands with his hands in proper position. If he is right-handed, he simulates a take-off with his left foot, swinging his right knee up and forward, and raises himself from this position, kicking both feet straight up in the air alongside the rope, at the same time turning his body so it is facing the imaginary runway. This may be repeated without undue fatigue and provides the same practice as running down the runway.

There are mechanical aspects of precision and timing which distinguish the good vaulter from the run-of-the-mill performer. One secret of good vaulting is the proper take-off mark. I have found that the correct spot for the take-off is directly under the hands of the vaulter when he is holding the pole above his head, and the pole is in the vaulting box. The athlete

stands with both feet under him so that, were a plumb line dropped from the upper edge of the top hand, back of the head and body to the heels, it would approximate the take-off mark.

This distance from the box usually approximates ten feet; sometimes it is as much as ten feet six inches for some vaulters who prefer a take-off slightly farther back.

A good vaulter learns that the pole does most of the work. The vaulter does not strive to jump as he leaves the ground. He learns to hang on to the pole, automatically shifting the lower hand toward the upper and with the opposite leg from the take-off foot continuing in a forward motion as in the running broad jump. This continuing motion swings the hips up to, and past, the pole, and the vaulter holds on in that position with the arms slightly flexed at the elbows.

This movement requires that the standards be placed from twelve to eighteen inches toward the pit. The vaulter thus is taught to hold on to the pole until it is in vertical position before initiating the pull-up which propels the body upward. It is to be emphasized that the vaulter drives his feet straight up in the air instead of letting them go out over the bar. The propulsion of the upward pull automatically provides clearance, if proper timing is observed.

It requires practice, aided by observant

coaching, to develop this movement automatically and without faulty shifting or without committing a common error of not taking off in a straight line. The take-off foot must be exactly in the center of the runway to attain full vaulting efficiency.

The experienced vaulter learns that, with each increase in height, a change in timing is necessary. Some novices can go over lower heights with inches to spare and yet fail to clear other heights, only slightly greater, all because they fail to allow for an increased time delay in the air before making the effort to clear the bar. Vaulting is a precision event which requires patience and practice.

I have had the good fortune to coach five of the eight American athletes who have attained heights of 14 feet 6 inches or greater. I have observed the other three as well, all of whom have been Cali-

fornia products. All of them were champions because they recognized the third factor of vaulting, speed. The pole vault, I must again stress, is not a jump as much as it is a run. It requires gymnastics talent and precision to vault well, but it requires more that ordinary speed to supply increased impetus which results in record performances.

Learned experts in the mechanics of force and motion could probably explain in terms of mathematical formula how this increased speed down the runway permits a vaulter to grip the pole at a higher point and attain a greater height than some other vaulter who, although possessing greater physical strength, has less momentum and fails to attain the force necessary to gain a record altitude.

Warmerdam increased his records by working on his speed and lengthening his run in order to attain this increased mo-

mentum. Together with his above-normal physical height, this speed permitted him to grip the pole at 12 feet 6 inches (the highest point for any vaulter yet developed), and thereby negotiate the arc necessary for 15 foot plus vaults. Sefton and Earle Meadows, who shared the 14-foot-11-inch record, were able to grip their poles at 12 feet 2 inches by building up their speed.

Increased speed means also increased shock upon the shoulders and upper body when the pole hits the box, and the hands are shifted for the vault itself. Each vaulter must determine for himself, through practice and increased proficiency, at which point he loses efficiency in his vaulting because of an excess of speed which reduces his ability to negotiate a vault with the required precision.

A gymnast, a precisionist, a sprinter—a champion vaulter must be all three.

The Eyes Have It in Baseball

By H. S. DeGroat

Director of Town and School Physical Education, Newtown, Connecticut

THERE are a few facts about the use of the eyes that apply to the playing of baseball at its best. If each player understands these, he is just that much better equipped to play this great American game.

Eye Focus

The first facts assemble themselves around eye focus. They prove how important it is that the player focus the eye or concentrate directly on the ball when at bat or as he maneuvers to catch the fast-moving sphere.

Just try this simple experiment. Look directly at one object in the right corner of the room and then swing the eyes to the left corner of the room and focus the eyes upon another object. In this movement how many other objects between these two were noted? Practically none, is the answer. This is rightly so. And in baseball it is good because quick action plus concentration on the ball is essential to good execution.

Application:—1. This fact indicates how essential it is to concentrate the focus of the eyes upon the pitcher and the ball while at bat and on the ball at all other times when it approaches the player.

2. This indicates how important it is that the pitcher be sure to focus his eyes upon the batter when pitching. We all know how loss of control can give a free pass to the batter with men on bases, if the pitcher is trying to watch the runner too long and is failing to get the proper focus as he delivers to the batter.

3. This indicates the importance of keeping the eyes on the grounder or the fly

ball as it approaches the player. The ball must be watched all the way into the glove.

Which Eye Does the Sighting?

The second series of facts involve finding which of the player's eyes is the "sighting eye." Point your finger at a point or small object fifteen or twenty feet away from you, sighting down the extended arm and pointing the finger with both eyes open. Now close the left eye and see if the finger is still on the object. Now close the right eye only and you will probably find that the finger has appeared to have swung over to the right, away from the object. If this is true you should understand that your right eye is your sighting eye. If it is the reverse of this, your left eye is your sighting eye. You will find these facts are true regardless of whether you use your left or right arm in pointing at the object.

Application:—1. There is no question of the importance of concentrating the sighting eye upon the pitcher and the ball when at bat. Most certainly that eye should be given a full and direct view. The head should not be turned away, nor should the eyes be rolling around if the batter is to hit consistently.

2. A useful suggestion which involves both the knowledge of eye focus and the sighting eye comes from a major leaguer. It relates to the fielding of a fly ball as it passes across the blazing sun. He says that the best results are obtained if the eyes focus on the ball until it reaches the edge of the sun and then shifts to the other rim of the sun until the ball emerges from

the bright spot. This cuts down the blinding effect of gazing directly into the sun.

Use of the Eyes

The third item of eye knowledge centers around the use of the eye itself. We will not go into the discussion of split vision and the facts involving persons that have blind areas on one side or the other as they attempt to play in the backfield in football. It is not so essential in baseball because there is only one small ball and its propulsion is controlled by only one thing at a time—the bat—or the player throwing it. It is not necessary to watch the possible receivers at the same time as it is in football. All that is essential in baseball is to focus the eyes and follow the course of the ball as it involves the various players.

The item of importance here is to have the player know that the eye can register information of what is going on at one side or the other of the player without turning his head. This is more useful to the pitcher and perhaps to the catcher than to the other players. It is the *simple fact that by dipping the chin*, one can see more on either side than if the chin is held high.

Application:—1. The pitcher can use this bit of information in his delivery when he has a runner on first or third base. It can guide him in his plan to hold the runner close or catch him off base. He does not need to turn his head but he must learn to see what is going on at his left or right and then focus his eyes on the batter again if he expects to maintain his

(Continued on page 28)

The Javelin Throw

By Clyde Littlefield

Track Coach, University of Texas

JAVELIN throwing originated in Europe. The Swedes and Finlanders were the first people to introduce javelin competition. Finland, in 1880, ordered a number of javelins from Germany for use in a Helsinki school. These javelins were crude sticks that were thrown about fifty feet and at a mark on the ground. In 1883, the Finns and Swedes were using javelins resembling the modern type, and the record improved to 33.5 meters,—about 109 feet 6 inches. In 1891, a Finn named Fellman won the event at Stockholm with a throw of 37.82 meters, thereby beginning the series of Finnish international successes. The Finns took all the medals in the combined right- and left-hand javelin throws at the Stockholm games, and they also won all the medals at Antwerp.

The javelin throw was featured along with the discus in the pentathlon at the ancient Olympic Games. It was also included in the program of the first modern Olympics at Athens in 1896.

The event probably was suggested by the art of spear-throwing in ancient wars. In 1908, the javelin throw became an Olympic feature. About two years previous to that date the event was introduced into America. American athletes did not become much interested in the javelin throw until about 1909. In that year Ralph Rose, the great shot putter, threw slightly over 140 feet.

The javelin throw is one of the most colorful of the field events, and has grown to be one of the most popular. It is now listed in practically every meet. Javelin throwing is a spectacular event that does not require an athlete to have excessive size or strength in order to be successful; but he must use correct form and skill. One with a long arm and long, smooth shoulders and upper arm muscles will have an advantage in training for the event. No other field event requires as much co-ordination and skill as does javelin throwing; therefore, careful attention must be given in developing the proper form and style which will be best suited to the candidate.

Frequently the question is asked, "Why do the Swedes and Finns throw the javelin better than the citizens of other nations?" The physical structure of the Swedish and Finnish athletes does not differ from that of athletes of other lands. We have watched their form, asked about details in throwing, and inquired into their training methods. Our conclusion is that in all of these particulars, in most instances, there is little difference in their

practices and those followed in this country. The Scandinavians probably have developed the approach run to the stop-board better, and it is there that they have gained distance in the toss.

The Finns regard perfect co-ordination in throwing as fundamental, and the basis of success. These men have accomplished perfection in co-ordination to a greater degree than have the athletes of America. They start javelin throwing early in life. In Finland, one finds this sport taking the place of baseball playing on the sand lots.

The javelin thrower, like a baseball player, must have a good throwing arm. Football players who are good in throwing forward passes are potentially good javelin men. It is necessary for a prospect to have some natural qualifications to develop into a champion. Many boys have been known to practice javelin throwing year after year without increasing their distances as compared with those of boys with native ability. Others have practiced in like manner and have become excellent throwers. Athletes must develop good throwing arms to improve distance and must learn to take care of their arms in practice.

Nikkenen of Finland holds the world's record at 258 feet 3¼ inches, and Jarvinen held the world's record for a number of years, throwing many times over 240 feet. Many first-class throwers have been developed in America, several men throwing over 220 feet, and one as far as 234 feet. Men throwing over 220 feet are considered excellent in this country.

Javelin throwing is one of the hardest events to coach. The size of the man does not indicate the best type. Men of all sizes have been able to gain great distances in javelin throwing.

The scratch line is a board two and three-fourth inches (seven centimeters) in width and twelve feet long, placed flush with the ground. The javelin must be held by the grip and hurled from behind this scratch-line, and the thrower must not place his foot upon, or over, the board. From the ends of the board, lines are extended at right angles. The throws are then measured at right angles to these lines which are called take-off lines. At regular track meets, it is well to have six or eight lime-marked lines twelve feet apart, running perpendicular to the throw line. These lines should be 210 feet long. Distance markers on these lines will be of benefit to the spectators. A marker for each individual competitor will aid the officials in running off the event. Measurements are made to the spot where the

point strikes the ground.

The javelin is made of wood or metal. A javelin should balance between three feet four inches and three feet six inches from the point, if it is to make the most nearly perfect flight and longest carry. The grip is near the center of gravity, and is 6.3 inches (16 centimeters) in length and made of whipcord. The circumference of the grip at either edge shall not exceed the circumference of the shaft by more than .984 inches (25 millimeters). No other place for holding is permitted. The javelin, itself, shall be not less than 8.53 feet in length and weigh 1.765 pounds (800 grams).

On choosing a javelin, the thrower should select one which does not bend easily. The wood must have extraordinary strength and stiffness for its weight to give satisfaction. A shaft which whips back and forth through the air will not travel as far as one made of wood which is not limber. A good thrower likes the balance well back on the whipcord. The beginner, however, will find it advantageous in his practice to have the balance at the other end of the grip.

Throwers should first master the art of holding the javelin in the hand. A majority of throwers grip the javelin just back of the whipcord with the index finger and thumb. The second finger is held close to, and ahead of, the index finger as a sort of support. The other two fingers will help balance and guide the shaft, but will not be used to any degree in making the throw. The tips of the finger and thumb are used in gripping the shaft. The javelin then lies in the curve of the hand.

The Finns, instead of holding the forefinger behind the grip, hold with the second, which is a longer and stronger finger. This method gives much better control. The forefinger (index) is curled around the shaft, and extends back toward the top of the javelin; and the thumb is either along the shaft or comes down against the second finger. This method of holding the javelin in the hand seems to give a turning effect to the implement as it goes through the air. The javelin also gets a better lay-out in its travel; that is, it travels a greater distance in the air before starting its drop to the ground. Many throwers make the mistake of using other holding positions.

There are three methods of carrying the javelin in the run for the throw: 1. On top or over the shoulder. 2. In front and with a downward movement across the body. 3. Back to the rear with the palm of the hand twisted in toward the body.

With any of these methods, the arm moves back at the beginning of the throw. All of them have been used by good throwers in America.

The Finns carried the javelin in front of the body in the 1932 Olympics. In the Olympics four years before, they carried it on top of the shoulder. Rhinehart of Indiana carried the javelin in the back position. Bartlett of Albion College carried it in the back position. For a couple of years, Graham of Texas carried the javelin to the rear in the run and throw. In his last years, he mastered the Finnish style of throwing and made better throws.

The coach will find both slow motion and still pictures, of great aid in his work. Demonstrations by throwers who have correct form will put over points to the beginners that cannot be expressed in words. The book published by David L. Holmes, called "Movies on Paper", carries complete action pictures of the best throwers in the 1932 Olympics. The book and these pictures are very helpful in teaching form.

The throwing movement is much like the overhand motion in throwing a baseball. The throw is distinctly overhand, with an arm and wrist snap for final impetus. All these movements are aided by the force from the back muscles, and drive from leg and toe. The chief consideration is to get the hand directly over the top of the shoulder, with the elbow advanced until the forearm straightens out. The force applied to the javelin must come right through the axis center of the javelin.

It is apparently impossible to gain distance by pulling down or to the side in making the throw. These movements tend to develop a sore arm.

It is well to learn how to handle and throw the javelin before practicing on the run, take-off, and throw for distance. The arm should be developed by short throws into the sand pits or at markers in soft ground. Throws with reverse follow-through and short runs are good for training. Practice should be held where teammates and spectators will not receive injuries.

After the preliminary practices, the thrower should start working on his run and form in making a good throw. The methods most frequently adopted are the cross-step, the hop and the front cross-step with spread of legs. In either form, there is no advantage in steadying the javelin with the left hand during the run.

No matter which form the thrower adopts, he will not get the best take-off by following the same rules as prescribed for the pole vaulter and broad jumpers in making their take-offs correct. He should stop slightly short of the take-off board after making the run in practice. Care must be exercised to avoid stepping over the line.

It is in the cross-step form that the

athlete, at his last check mark, and as he nears the take-off board, steps forward on his left foot, then turns his body, and steps forward on his right foot behind, and to the left of, his left foot. He is then ready to step forward with his left foot and to throw the javelin with a reverse.

The hop method is similar to the jump on the right foot which a right-handed thrower might use in throwing a baseball for distance. The thrower places his left foot forward, then forward again with the right foot following. The right does not go ahead of the left foot until after the throw.

The distance for the take-off run varies with individuals. The average distance is 105 feet. Some throwers use three check marks; however, as a rule, they use only two. One mark is at or near the start of strides, approximately thirty feet, from the scratch line. As the thrower comes down the run, carrying the javelin as already described, he should strike the last check mark with his left foot. He next steps forward with his right foot, using a springing stride, and at the same time bringing his javelin arm backwards to the rear. Then he, with his left foot, keeping his body slightly forward, takes two short steps. While making these last two steps, the thrower brings the javelin out and back. At the end of the last step, he points his right foot out and swings it across his left. The body does not turn a great deal, but the thrower thus gains the full use of his shoulder and back muscles for a smooth and vigorous delivery. The feet should be spread slightly in taking the last step and the throw made with the arm and wrist-snap at the finish. This snap is quick. The thrower finishes well upon the right foot to gain a slight reverse and a good follow-through.

Those who saw the 1932 Olympic Games at Los Angeles know that the Finns ran much faster than the Americans in throwing the javelin. The Finns are faster near the end of the take-off, although they do not run at full speed. They seem to come along easily, and about the fourth stride from the last check mark (about thirty feet from the take-off board), they gather and make a final fast rush. The part of the technique that counts is from the check mark nearest the take-off board to the actual throw. It is well to go through a count of five. There are five steps in it. The thrower may make the count of five aloud and get co-ordination. Coming up from the first check, the javelin thrower hits the second check mark with the left foot. The thrower is carrying the javelin with his arm about the shoulder, point forward and diagonally down. On the count of one, a step forward with the right foot, and the point of the javelin comes up in front of the shoulder. At the count of two, the left foot goes forward, turns in pigeon-toed, and the javelin is brought back. On the count of three, the

right foot crosses over in front of the left, and is placed on the ground, almost parallel with the take-off board. This is a short step, and the arm and javelin are at the end of the back swing. On the count of four, the left foot reaches ahead again, and the toe is pointed about diagonal to the board. This is the throwing position, one in which the arm, back, and shoulder come forward for the final effort. The stance is wide, the legs spread, but comfortable. On the count of five, there is a semi-reverse. This movement helps the thrower from crossing the take-off board and making a foul. This method seems to be simple, and the most natural to many throwers.

Several forms of javelin throwing have been described. All throwers do not follow the exact movements here explained. The fundamental action may be used in any deviation from these forms. Each individual will display natural differences in steps, reverse, and other movements.

After the athlete has passed through the first two or three weeks of preliminary training, three days of throwing are sufficient,—two practice sessions and competition; itself. The practice sessions come on Mondays and Wednesdays. Particular attention on these days should be paid to checking up on the marks, working on form, and developing proper timing. The thrower works on the adjustment of speed with the final effort, and at the same time works on relaxation before the throw is made. On these two days, no throwing for distance should be attempted. It is best if the athlete saves his best efforts for the day of the competition.

On Tuesdays and Thursdays, jogging around the track a couple of laps, calisthenics, and working with sprinters and jumpers are usually good exercises to develop javelin men. The mistake of not warming up enough should never be made. On Fridays, it is well to do very little work or have complete rest.

Rules to Remember in Throwing the Javelin

1. Practice for form only two or three times a week. Have competition only once a week when in condition.
2. The Finn's throws carry higher and vibrate much less than the throws of others. At the greatest height, the javelin "lays." The "lay" has a tendency to cause the javelin to ride or sail through the air. Jarvinen is the only man who has been able to acquire nearly a perfect "lay."
3. The body and arm should be relaxed as the throw is started.
4. The thrower should take care of his arm. He should not overwork. It is well to rest two or three days prior to a big meet.
5. If the javelin fails to pass straight

(Continued on page 26)

Some Phases of Defensive Baseball

By Carl Stockdale

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and

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YOU are listening to a broadcast of a major league baseball game. As the play-by-play description comes over, your announcer will give the name of the batter coming up, perhaps some intimate detail of just what he is doing as he prepares to hit, his batting average or other facts in his record—all helping you to understand and visualize his description. Somewhere in his word-picture, he will state that the outfield is playing the batter over to the left or well over to the right or deep—some definite position for this particular batter.

To the listener who knows little baseball, and who has never been a student of the game, it may mean little or nothing. To the listener who knows baseball this has definite and immediate significance. The meaning of this observation on the part of the broadcaster is the basis for this article.

In major league baseball this description, as to how the outfield is playing a certain batter, has many things packed into its background. It means keen observation and a detailed study of the batter's habits, his weaknesses and ability. Every player on the defensive team, particularly the manager, battery, and the outfield, will know most of his batting characteristics. They will know what his batting average is at the moment and what it has been in the past. A careful study has been made to learn the kind of pitch he can hit and the ones most likely to give him trouble. To illustrate the point: he may consistently drive a fast inside "letter-high" ball out of the park, but on a low curve to the outside corner he may not do so well. A change-of-pace mixed in at the right time may throw his timing off. There have been few batters that have not had some weakness, some pitch that was harder for them to hit than others. Many good ball players have been kept out of major league ball because they could not hit a fast-breaking curve. Naturally, as soon as the pitchers learned this they "curved" them out of the league.

This is only the beginning. Defensive teams will also acquire a definite fund of information as to where the batter hits, if he hits a long ball or line drives and so on. They will know the kind of pitch he likes and those he does not like. They will know if he will hit at bad balls at times, or if he will make the pitcher get it over before he will swing. They will

know if he hits straight away, or is a pull hitter or a late swinger—causing him to hit most frequently to a certain part of the field. They can anticipate long, high flies, "Texas Leaguers" or line drives. On certain power hitters, for example, who drive well-hit balls on a line—even the infield may pull away back on the grass, especially if the batter is not a fast baserunner.

As a result of this knowledge concerning each batter, the defensive team will play him in a way that will take full advantage of the percentage of times he will hit as expected. Just to go a little farther in way of illustration. A new man comes up with a major league club. Before he steps to the plate for the first time, much will be known about him. His minor league record, reputation as a hitter, information from scouts or others who have seen him play—all of these things and many others will have been studied. If he is a stand-out, he will be studied even more carefully and watched for batting style, stance and other characteristics. The opponents may try him out in other ways, test his nerves and confidence by making remarks among themselves which they make sure that he can hear. They will find out how he handles himself on a high, inside pitch. He will be studied from every angle.

We have been told that baseball cannot be taught from a book and we agree with that up to a certain point. If we can assume that the players and coaches reading this have played mechanical baseball from the time they could carry a bat or throw a ball, we feel that we will be fairly close to what the average American boy is doing today. However, in high school, college, amateur, and even in semi-professional ball, we have seen too many teams do just that—continue to play only mechanical ball.

This article is concerned with the high school and college players and coaches or the amateur and semi-professional players and managers whose teams play opponents, about whom they have little or no information. In many cases they have never seen them in action until the day of the game. Set up a situation of this kind. Use the college team that is scheduled to play a team it has never seen. What can be learned, in one afternoon, that will be of advantage to the defensive scheme of play? Perhaps we will have a far more interesting day of it if we deliberately

plan to discover every weakness in the other team that we can. It is easy to be so busy with our own pre-game workout that we will fail to do this.

During the batting practice of our opponents, we can watch where and how each batter stands at the plate, his swing and how he holds his bat. These details of batting form will be taken up later. We will get only a general idea during batting practice. In major league ball, a regular batting practice pitcher will usually be used. This may not be true of college teams, but in either case, the pitcher should throw medium fast balls right over the heart of the plate. The idea here is that batters will get their "eye on the ball" and an even swing. If the batter wants to cut at a few curve balls, he can ask the pitcher to throw them just before he finishes his turn. He should then lay down two or three bunts. It might be well for him to run the last bunt out, trying for a fast get-away, followed by a sprint to first base. We will watch all of this.

The Importance of Batting Order Positions

We can learn some things from the opposing team's selection of men for the various batting order positions. We can look for them to select men with special qualifications for each place. We will try to learn if the men chosen will measure up to these generally accepted qualifications.

The lead-off man, first of all, should be able to wait a pitcher out and must not hit at bad pitches. His job above all is to get on, one way or another. He has done an effective job if he can work the pitcher for a base on balls. He should be able to take one, or even two, called strikes, and still find it possible to hit the third pitch with confidence and without tightening up. If he is small, all right, for it makes him harder to pitch to. Being small, however, does not necessarily make him a good lead-off man. He should be able to bunt and drag or push the ball, that is, push the ball past infielders as they come in for an ordinary bunt. He should be a fast baserunner for two reasons. If he is fast, he will beat out infield hits that would go for outs with a slower runner. Due to his speed, momentary fumbles will get him on first on an error. With a slower man, infielders may recover the ball in time to make the put-out. The

other reason for speed develops after he gets on base. If the next man up hits, the lead-off man will advance an extra base. The better he can hit, the more times he will get on base. Later in the game his hits may not drive in as many runs as the man in the number four position, for he will be following the weak end of the batting order.

The second hitter should be the best sacrifice bunter. His ability to sacrifice-bunt is important when his team's offensive strategy calls for a one- or two-run lead in the early innings. This might not be so true of the team that plays for a big inning in the early stages of the game. In this situation, it is his ability to produce results with the hit-and-run play that counts. Suppose the opponents have a pitcher who, they believe, is good enough to protect a small lead. If the lead-off man gets on, and the number two man sacrifices him down, two things have been accomplished. The lead-off man is in position to score from second on hits by the good hitters in the three and four positions. He is out of danger of being forced at second by a ground ball, and the chance for a double play is eliminated. If this number two man is fast and can beat out bunts, it is a valuable asset and many times will result in getting two men on with nobody out. In the case of the caught-line drive with a man on first, it is up to the runner to get back to first safely. When a fly ball is hit, the runner should go down toward second as far as he dares until he sees if the fly is caught. If it is, he hustles back to first, but if it is fumbled, he is now in position to get to second before a quick recovery gets him into a force play. If the fly ball can be handled by an infielder, he is, of course, protected by the infield fly rule. If the style of play calls for the use of the hit-and-run, the number two man should be the best place hitter on the club. He should also be a good waiter. He may be a choke-type hitter, but if he is a free swinger, he can still be an effective hit-and-run batter. Like the lead-off man, if he is a good hitter, all the better, for if the lead-off man fails to get on, we may still get a man on for our power hitters to drive in.

Good Bunting a Requisite

Incidentally, every ball player should be able to bunt. If he is going to play ball at all and cannot bunt, he should take time out and learn. Bunting can be learned, although different in technique from batting, but takes patience and much practice. Here is a tip on one of the phases of good bunting. The bunter should be well forward in the box because it gives him more fair territory in which to get his bunt down and he will have fewer bunts roll foul. He should not change his hands on the bat or move his

feet into the bunting stance until the pitcher begins his wind-up.

We should find our opponents' best batters in the three, four and five positions. On a percentage basis, these batters will come up with more men on the bases than any others in the line-up and their hits will pay off with more runs scored. In the placing of these three men, other factors being equal, the fastest baserunner should be placed ahead of the slower men. The most consistent hitter, however, will usually be put in the number three position in keeping with the idea of getting more men on base. The men in the four and five positions are the power hitters, the sluggers who may break up the ball game at any time. Usually the best hitter will be placed in the number four position, but we believe that the number five man will be up there with men in scoring position just as many times as, or more than, the number four. In any event, these three men will get our special attention as the afternoon goes along.

The Sixth-Position Batter

The next best batter on the team will, no doubt, bat in sixth place. On the days that he hits, or if he gets only one hit in this particular game, it may be the difference between winning or losing. He may be just a fair hitter, but the type that hits when hits mean runs. He will certainly come up with men on the bases, if they get men on at all, for he has the three best batters in the line-up batting ahead of him.

There is another angle in watching this number six batter, just in case he comes up in the "clutch." He may or may not be a good batter. In major league ball, we would have to consider him dangerous, but in high school or college ball we will look over this sixth batter, and the three to follow him, searching for weaknesses. There must be some reason for these men being down in the batting order, and it is our job to find out what these weaknesses are. A high school coach, for example, may be lucky enough to have four or five

good batters, but it is not often that he has six or more. If he has, and a good pitcher, he will not have much to worry about. In professional ball, we will usually find the battery men automatically batting eighth and ninth. There are exceptions, of course, particularly in the case of the catcher who is working regularly and handling all of the pitchers. If he is a good hitter, he will be found well up in the batting order. In college ball, one or both may be found high in batting order because they are good all-round men, can hit, and will play in most of the games. A hard-hitting pitcher, on days that he is not pitching, will sometimes be used in the outfield to add batting strength. Playing every game makes a big difference. It is not unusual in school baseball to find a pitcher or catcher, or both, hitting as a part of the "Big Three" (numbers 3, 4 and 5 positions).

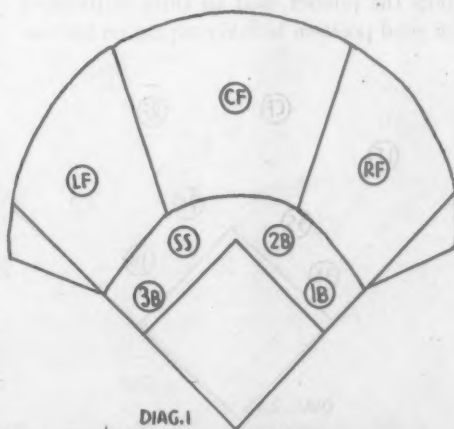
There is another way to study defensive play. When two or more candidates of about equal ability are out for a job, most coaches and managers will give the call to the best hitter, especially if the players in question are first basemen or outfielders. So it may pay us dividends to check on the defensive positions of the players along with their places in the batting order. Offensively, too, we can be on the lookout for poor fielders and weak throwing arms because the coach or manager may have such a man in the line-up because he can hit, regardless of his ability, or lack of it, in the field.

The preliminary workout over, we take the field and are ready for the first pitch to their lead-off man. The game is on and we can make a more accurate study of the opposing team's batters. The first time they bat around, we should learn much and know something about how to pitch to each man the second time around. We may have a score book being kept on our bench to show exactly what each man does at bat and build our additional observations around this record.

It may be too much to expect the members of a high school or college ball club to retain many details, but there is nothing to prevent the coach from earning his salary by making mental notes on each batter, and as the game progresses, by reminding his team, the catcher in particular, as to observations that have been made. He should talk it over while the team is in on the bench. He should anticipate the batters that are to come up the next inning, before we take the field.

Watch for Qualifications of a Good Batter

We are trying to find out who our opponents' dangerous batters are and how many they have. We should be able to do this by watching for some of the qualifications of a good batter. Their good batter will get his bat back in hitting



DIAG. I

The approximate defensive positions of the infield and outfield for a straightaway hitter.

position and stop all preliminary batting movements when our pitcher is ready to pitch. His arms will be away from his body and free. His swing will be on a level, parallel with the ground, and he will have a perfect follow-through as he swings, with a good wrist action—his arms loose, not stiff or straight. His stance will be erect and natural, with his weight evenly balanced. His forward step into the ball will be nearly in line with his back foot and not too long. Although this step may be in toward the plate, what he does with his forward foot will not be too important, if he is in proper balance, for the hitting power comes from the rear foot. His swing will tell the story. The easiest way to tell a batter's weakness is to watch him as he swings at the ball. If he is not well balanced, and his swing is not well coordinated, we can tell that something is wrong, especially if the pitch is in the strike zone. On the other hand, if we see that he gets everything into his swing, that he is well balanced, and his timing is good, we will know that it was a ball that he likes to hit. His swing shows purpose and confidence. Our personal experience has been that a batter can be taught just about everything a good batter should do, but his swing. A batter's swing is like finger prints, there are no two individuals exactly alike.

Suppose that we have decided that the opponents' lead-off man is a good batter. We will watch him now for additional information. First, we will observe where he stands in the batter's box, in relation to the plate. If he stands well back in the box with a long grip on his bat, our first pitch to him will be a curve ball outside and low. We will watch his swing and step. If his step is in toward the plate, his cut will probably be in the correct line. If he takes a long step, brings his shoulders around with their weight behind the bat, has a good wrist motion and a perfect follow-through, we are up against a long-ball hitter. We watch where he holds his bat, for additional proof. If he is holding it with his left hand back, against the knob at the end of the bat, both hands close together, we are sure he is a free swinger—the kind of batter that will hit for extra bases.

Types of Batters

At this point, it may be well to classify all batters into two general groups. We have just discussed one group, the long-ball hitter, who, after all, is not likely to be used as a lead-off man. The lead-off man will be far more likely to fall into the other group which we will call choke-hitters. The good choke-hitter will have a grip on the bat some distance out on the handle, power in his forearms and wrists, with a great deal of wrist motion and a perfect follow-through. He will hit sharp line drives, hard grounders and

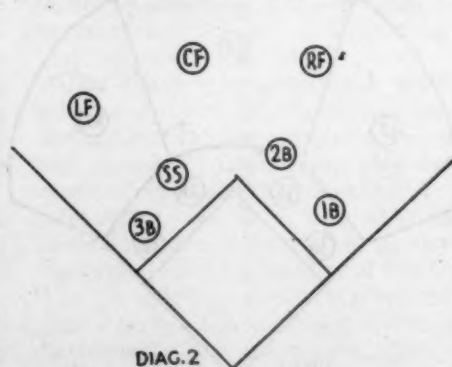
"bloopers" over the infield. It is quite possible that this group will hit more consistently and accurately than the free-swinging, long-ball hitters. The choke-hitter may hit more often, but not so far. With powerful arms and a good wrist snap, he may still be a long-ball hitter even though using a choked-up grip. A vicious swing may indicate this, but he may have to hit a home run to convince us.

Classifying Hitters as to Where They Will Hit

By classifying a batter as a long-ball hitter or a choke-hitter, we have decided *how* he will hit. Now let us try to classify hitters as to *where* they will hit. Again they will fall into two groups, the pull-hitters and the straightaway hitters. What can we look for that will indicate *where* they will hit the ball? If the pull-hitter is right-handed, a good percentage of his hits will travel to left field. If he is a left-handed hitter, his hits will go into right field. His swing will give this away for his bat, as he swings, will meet the ball well beyond his front foot. This means that his swing is ahead of the ball, that his bat is ahead of a point directly opposite him before the ball gets to him. The result is that he will "pull" his hit and so we tag him as a pull hitter.

Pull-Hitting

Incidentally, pull-hitting means that drives will go near the foul line and it has its advantages and disadvantages. One of the disadvantages is, of course, that the minute we think the batter is a pull hitter, to left field, for example, we will pull our whole outfield over to the left. We will also pull our infield over toward third base. There are two advantages. Foul-line hitters have only two men in position to field well-hit balls. A right-handed hitter, for instance, will have only the third baseman and left fielder directly in front of his hits, whereas, the straightaway hitter will have all four infielders, plus the pitcher, and all three outfielders, in good position to make a play on his hits.



DIAG. 2
The approximate defensive positions of infield and outfield for a pull-hitter to left field.

Another advantage is to be gained that if a pull hitter to left is up and is being played as a foul-line hitter, he can, if he has the ability, delay his swing occasionally, just enough to cross us. There will be far more uncovered territory for his "poke" hit to land in safely, under these circumstances.

Two or three swings will show if the batter is swinging ahead of the ball (the pull-hitter) or swinging even with it (the straightaway hitter). By swinging even with the ball, we mean that the point of contact, when the ball is hit, is directly opposite the batter. Swinging even with the ball produces the best batters and this is exactly what we are trying to teach our own boys to do. This even swing indicates the straightaway hitter. He will have a tendency to hit inside balls to left field, outside balls to right and a pitch through the middle of the plate, to center field. Most of his hits will be in center field, however. If he is a free swinger, an extra base hitter, we can play him a little deeper in the outfield. There is a baseball expression, that describes some hitters as hitting "with the pitch." In other words, they "get into" the ball wherever it is, in the strike zone; they are straightaway hitters who get everything into their swing. When they lean into a curve ball, they do it with the same confident force that the ordinary hitter gets into his drive off a medium fast ball over the least of the plate. This with-the-pitch, straightaway hitter will usually drive this curve ball into right field. Bear in mind that the pull hitters will hit to their field, regardless of the pitch. Before we go on with our ideas on how to pitch to these two types of batters and where we will place our defensive men, let us make the statement that straightaway hitters are the hardest to analyze for weaknesses; they are the best batters and, therefore, from the point of view of what we are trying to bring out in this article—our biggest worry.

We have mentioned the batter who stands back in the box, and later we will discuss the one who stands well forward. However, a straightaway hitter may stand in any position in the box. It is all a matter of timing. If he shows all of the characteristics of a good batter, whether he is a free swinger or a choke-hitter, he merits our closest attention. Our pitcher will use the best ball he has and will try to get it over a corner of the plate, then simply wait and hope. If he is as good as he looks, everything will depend upon the "stuff" our pitcher has, the fielding ability of our team and the breaks of the game.

Let us turn our attention now to some other specific batting peculiarities of some batters, that may help us to decide how to pitch to them and how to play them in the field. One of these is the batter that crowds the plate. We will pitch to

him on the inside corner giving him both high and low fast balls. His crowding the plate will have a tendency to make him a pull hitter. However, if he stands an average distance away from the plate, but still well forward in the box, we may guess that he is compensating for a weakness—that he is up there fighting to hit curve balls. He has asked for it, from his position at the plate, so we will try him out—call for a curve inside and low. We may have found his weakness before he takes his first swing.

The Late Swinger

Another type is the batter who gets his bat around late—sometimes known as a late swinger or slice hitter. In amateur ball, this late swing is usually evidence that he is simply a weak batter. If he hits in spite of his late swing, we will use a great deal of "stuff" on him (all the curves our pitcher has) mixed up with fast balls over the inside corner of the plate.

Then there is the batter with an unorthodox batting form. This may be apparent by his pulling the forward foot away from the plate on the swing. Unless this putting his "foot in the bucket" is the obvious sign of a weak batter, he must be watched carefully. If he is just a weak batter, we will know it at once by combining this fault with others. There have been many good natural batters to prove that we cannot take for granted that this mannerism alone is evidence of a batting weakness.

Some batters, too, will stand with their left foot deliberately back and away from the plate. As the pitch comes in, they bring the foot back in line when they step and swing. Some of the batters who have used this stance with success, feel that it gives them more power.

There is another sign that we can look for that may betray a batting weakness and that is by watching the batter's hips. If he pulls his hips back as the ball comes across, he is hitting with his arms only and the chances are that he is badly off balance. We can throw curves to him, on the outside corner, all afternoon. The middle of his body is pulled back, and even if he "connects," it should be an easy "pop-up" or a weak grounder. This is a very bad batting fault and difficult to correct. Such a batter is not a natural hitter and will never get into really fast baseball—unless he is a pitcher.

Occasionally, we will see a batter whose hips come in and the shoulders drop back as the pitch comes in. With such a batter up, we will use pitches over the inside corner of the plate, for his hips and legs are out of balance with his shoulders and he will have trouble with his swing.

There is another detail that we can watch for in some batters. In all other respects, they may look like good batters,

but they tend to pull the bat back too far as our pitcher is ready to pitch. In pulling the bat back too far, they have put too much strain on the forward shoulder. This strain will pull them out of line and balance and make them easy for a pitch delivered low on the inside corner of the plate.

When we see a batter swing up on a ball, that is, when the swing starts, and when the bat comes forward in a line going up from the ground, we pitch knee-high balls to him.

The "Chop-Down" Hitter

If on the other hand, we find a batter that "chops down" on the ball, we will pitch "letter-high" balls to him. By "chopping down" on the ball, we mean a swing that goes down toward the ground as the bat advances forward.

We very often find batters with the faults described above in the seven, eight and nine positions in the batting order.

Even if we grant that there are some weak batters on our opponents' team, there is no excuse for our pitcher to get careless. He must pitch to them. Unless the game goes to extra innings, we have twenty-seven men to retire. When playing for outs the man in the number nine position is just as much one of the twenty-seven as the man in the number four. As has been said, we will bear down on our opponents' good batters or when in a hole, but we must never get careless, loaf or pitch a slow ball to a supposedly weak batter. If he does get on, we are that much nearer to the head of the batting order. We have been through the sad experience caused by such pitching to weak batters, too many times.

We might make a few remarks, at this point, about pitching in general. It is, of course, the main point about which our whole defensive strategy is built. All pitchers, to be successful, must have three pitches at least, a fast ball, a curve ball and change-of-pace. A pitcher must have one of these to use as his best pitch—his

one good ball. It may be delivered overhand, sidearm, underhand or crossfire. It is fine if he can control the other two as well. Nevertheless, he must have that one effective pitch that he can put right where he wants it a major part of the time. He must have perfect control of that one good pitch and keep that control when he is in a "hole" and the going is "tough." Fifty per cent of a pitcher's assets is control. Given two pitchers of equal ability, the one with the better control will be by far the more successful.

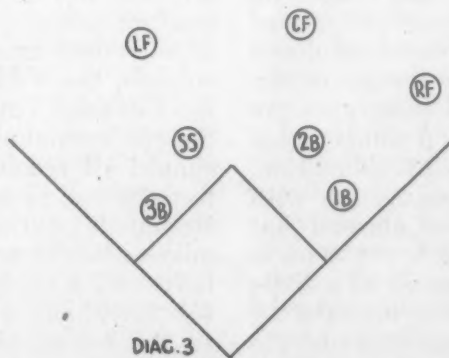
Knowing the Count

All players on the defensive team should know the count on the batter before the pitch is made. They should also know the kind of pitch that is coming up. To make this obvious, one example will be enough, a curve ball being delivered to a straightaway batter. Knowing the tendency of such a batter, we can be set to play him accordingly. Since the catcher is covering up his signs, making it difficult for the first or third baseman to see them, the relay sign should probably be given by the shortstop or second baseman.

It is very important that our pitcher get that first strike over the plate for a called strike, a foul, or a swing and a miss. In this connection, we will consider our pitcher away ahead of the batter with a count of one strike and no balls, a one and one count is still in favor of the pitcher and even with the count of one strike and two balls, there is not too much to worry about. The point we are trying to emphasize is that he has to get that one big strike in there. Some batters take a free, gamble swing at that first pitch, that is in the strike zone. With this first strike against him, he must be more conservative and with two strikes on him, he is in a hole. Let us say here that we do not like to see one of our own batters go down on a called third strike.

In the outfield, our center fielder should be our best ball-hawk. The other two fielders may be pulled over toward him, but he should be given the right of way when playing a straightaway hitter. The way we play our outfield will depend upon their individual fielding ability. Some fielders can take a ball going away and over their shoulder, while others are not so good at it. Generally speaking, the outfielders should play in as close as their fielding ability will permit. The gamble, of course, is obvious. By playing in close, they will get line drives that ordinarily would fall safe in front of them. All outfielders should be able to go well back, from their standing position and make catches on high fly balls. When a long drive goes past the outfielders, the relay positions should be taken with all speed. The relay man should go out close to the man recovering the ball; he must get close,

(Continued on page 80)



DIAG. 3
The approximate defensive positions of infield and outfield for a pull-hitter to right field.

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Trend Toward Separate Federal and State Commissions on Physical Fitness

THE State of New York has introduced companion bills in the Senate and the Assembly, creating a legislative commission to promote physical fitness through physical training, athletic sports, recreation and camping, and making an appropriation for such commission. In addition, several other states are contemplating such bills and a similar federal bill is presently being considered in the House of Representatives.

It is an established fact that in this war the armed services did not enjoy the advantage of having well-conditioned men come into service. This generation of draftees as a whole is considerably softer and weaker than their fathers were in 1917. Modern machinery, mechanized industry and agriculture have to a great extent emancipated our muscles from work. Automobiles and the lack of rugged activities have resulted in a lack of physical fitness in the youth of America, which seriously handicapped our war effort.

It is true that after World War I many states passed so-called mandatory legislation for physical training, but in most cases, inadequate definition of authority, lack of earmarked funds, and apathy on the part of our educators, nullified the effects of such legislation. Even with the increased emphasis on physical fitness following the outbreak of the present conflict, our existing school programs are not as effective as they should be. A survey conducted by the United States Office of Education, which followed a special drive in connection with its victory program on physical fitness, showed that there had been only an increase of 6 per cent in physical fitness participation as a result of a little over a year's emphasis. This 6 per cent brought the total figure of boys of high school age who had the opportunity of participating in any program of physical fitness to 51 per cent. In other words, 49 per cent of the youth who were in high schools were

not provided with any program, whatsoever, to improve their physical efficiency.

Even today most young men entering the service are totally unprepared for army life. It takes weeks and months to bring them into the physical condition necessary to proper military efficiency. Months of unnecessary effort which might have been avoided if our schools and civilian agencies had done their jobs. Both the army and the navy deplore the fact that so many of our young men are being sent into our armed services without the ability to swim sufficiently to save their own lives; without the leg strength to allow them to jump combat obstacles, such as ditches and fences or other enemy-made obstacles; without the arm and shoulder strength which would enable them to pull themselves up over ledges, or save their lives by climbing up or down ropes and rope ladders, and without the agilities, developed by athletics, that would increase their chances of staying alive in various combat situations.

Had we had proper physical fitness programs in America for the twenty-three years prior to Pearl Harbor, many of our boys that made the supreme sacrifice would be alive today and it would not have been necessary to draft fathers in this war, because we would have had enough physically fit single men. In addition there is an economic loss. Approximately a million men have been returned from overseas physically unfit, a great many of whom are neurotics who will be an expense to the taxpayers through disability claims and pensions for the next forty to sixty years. A proper program of physical fitness for these men, especially when they were in their formative years, would have prevented such a condition in the majority of cases. There is also an economic loss in the destruction of expensive planes and other types of military mechanized equipment because of fatigue on the part of the operators due to lack of physical fitness. An ounce of prevention is still worth a pound of cure.

It is obvious that universal military training cannot be considered as a substitute for physical fitness. Physical fitness should be based on a continuing and graded progression, and is especially important while youth is in its formative years, long before they would arrive at military age.

It is also obvious that our schools are unable to meet the needs. In the first place, a program of physical fitness should not be limited for those attending schools. Approximately only 50 per cent of our youth graduate from high school. Parochial schools, the Y.M.C.A., the Jewish Welfare Board, the Catholic Youth Organization, Boy Scouts, Girl Scouts, community, church and industrial groups, should all receive the benefit of advice in regard to prepared programs, procedures of organization, standards, statistics, etc. that such a National Commission could make available in the same manner that the United States Office of Education functions for the schools of the nation in educational matters. In the second place, most grade schools and high schools are open for only nine months out of the year. What about the other three months?

Some overall state organization is necessary in

order to adequately plan and co-ordinate all efforts within a state. Some separate agency is, also, necessary on the federal level. Physical fitness should run along with education, but not be a part of it, and funds should be definitely ear-marked for this important program. Such commissions should be organized separately from health organizations, which are already effectively set up in the various states. Such commissions should also operate through existing agencies.

In the creation of these commissions, I can see no conflict with education or health organizations; rather will they act in the way of supplementation and augmentation.

Our young men who have run the rigors of war know that there is no substitute for physical fitness. Our young men and women who have been physically conditioned in our service camps can tell you there is a vast difference between guessing and knowing that you are physically fit.

It is amazing that a nation as intelligent and progressive as our's has been willing to pay such a frightful price, yet remain so indifferent to a lesson that offers such life-long benefits to every man, woman and child. Now that we have been awakened with a shock to the fact that physical fitness in America is a "must" job, let us get organized to do it. Now we have the opportunity! Now is the time to act!

COLONEL THEODORE P. BANK,
President, The Athletic Institute

Intercollegiate Athletics and the Spectators

*The third in a series of unpublished
articles by the late Major John L. Griffith*

WHEN intercollegiate athletics were in their infancy in the various colleges and universities in this country, the students who were managing athletics, not being given financial assistance by the college and university authorities, were forced to solicit outside aid. Attempts were made in those days to sell tickets to the undergraduate bodies which, in most cases, were comparatively small and to townspeople. A local citizen who would buy tickets to the college games was looked upon as a benefactor. This plan of financing athletics was not peculiar to athletics because the general public was importuned to buy tickets to the lecture course entertainments, to the college debates, college theatrical performances and what not. In the majority of the high schools and colleges, the support of the members of the local community is still sought in connection with the promotion of school and college performances, entertainments and activities. If a band is organized or a swimming pool, gymnasium or athletic field is to be built the home merchants and professional men are quite generally asked to help pay the bill.

In recent years in some of the universities, the attendance at football games has increased to such

an extent that the number of tickets which may be purchased by one individual is limited. The students, faculty, and alumni are generally given priority rights in the purchase of football tickets, and the general public is allowed to buy whatever tickets are available after these preferred groups are provided for. The football stands thirty years ago provided ample seating accommodations for the students, faculty and alumni together with their friends for any given football game. As the student attendance has increased, and as the faculty and alumni have grown in numbers, it has been necessary to increase the size of the stadia.

Because large crowds in recent years have attended some of the games at some of the universities people sometimes assume that all of the games sponsored by the fifteen thousand high schools and six hundred colleges are well patronized while the fact of the matter is that at only a comparatively few of the educational institutions are the games attended by ticket purchasers to such an extent that intercollegiate and interscholastic athletics are self-supporting.

Consider, for the moment, the effect of intercollegiate athletics upon the spectators who attend the games and the effect of the spectators on the educational institutions. In the first place, it is safe to assume that the majority of ticket purchasers who attend the big football games in any part of the country are largely made up of students, alumni, instructors and their immediate circle of friends and relatives. The percentage of the number of tickets sold to those who have no connection with either team is relatively small. The behavior of the spectators at a big football game is, generally speaking, commendable. The people arrive in an orderly manner and disperse in the same way. There is some betting and there is some drinking on the part of a few of the fifty or seventy thousand who attend a football game. The experience of the Intercollegiate Conference, however, demonstrates that drinking, betting, and disorderly conduct on the part of the spectators can be reduced to a very small minimum if the proper appeal is made. In this conference when the tickets are mailed to the purchasers, a request is made that each spectator refrain from taking liquor with him to the stadium and refrain from betting on the outcome of the games. The spectators are asked to treat the officials, visiting teams, and guests in a chivalrous and courteous way, and the results have been altogether good. This leads to the conclusion that it is possible to surround the college games with a wholesome atmosphere. Certainly college football crowds are better behaved than are the crowds that attend professional baseball games, prize fights or wrestling matches.

President Faunce has suggested that "America will never condemn any kind of work or play because it is of absorbing interest." There are some however, who maintain that, since a large number of the American people find football interesting, they consequently cannot likewise be interested in art, music or scholarship. There is nothing, however, to prevent those who are interested in the

development of art from painting fine pictures or sculpturing beautiful statues. The musician has as good an opportunity to develop his art as musicians had at any time in the history of the world, and the fact that some people enjoy college football should not necessarily interfere with the development of music. It has never been proved that, if students were not permitted to attend a few football games each fall, they would spend the time thus saved in the libraries or laboratories. There are some, on the other hand, who believe that college football serves as a stimulating recreation to the students who perhaps spend from eight to ten hours a year in attending the games. From the standpoint of the spectators, the charge that college football is a detriment rather than a benefit remains as yet unproved.

Some suggest that it is not the function of the college to provide recreation, entertainment, or education for those who are not members of the undergraduate body. At the same time, our colleges and universities in increasingly large numbers are maintaining extension bureaus and departments, the purpose of which is to extend the benefits of education to those outside the college walls. The radio today is being used by college professors as a means of imparting instruction, inspiration and education to the general public. Our universities are more and more assuming responsibility in connection with the solution of community problems. Modern conditions are vastly different from the conditions that endured when the earliest American colleges were founded, and in this changing world the intelligence of our college faculties is being utilized to interpret the trend of social, political, and economic conditions. The monastic idea of the university and of education has no place in the present educational scheme. The monks of the middle ages believed that it was necessary to withdraw from the world to avoid contamination and corruption by contact with the people of those times. Surely there are not many who believe that the university will be contaminated by having a small part of the members of the society of which the university is a part visit the institution a few times each year in connection with the college football games.

Dr. Rand Rogers suggests that adults should not be provided with athletic entertainment by the boys and young men who play on the school and college teams because he feels that this is not good either for the spectators or the athletes. Consequently, he proposes that professional and semiprofessional teams be maintained in the towns and cities of the United States; that the high school and college athletes be permitted to play on these professional teams; and that the public be thus given the opportunity of witnessing the professional sports instead of witnessing the school and college games. Twenty-five years ago professional athletics, especially professional baseball, flourished not only in the larger cities, but in the small towns and country districts as well. These professional activities outside of the large cities have quite generally been abandoned, and the people have transferred their interest to the athletics of the schools and colleges. The plan, then, that Dr. Rogers suggests has been tried, and

today the American people are more interested in amateur athletics than in professional contests. This means that our ideals of sports are being shaped by the schools and colleges rather than by the professional athletes and promoters. Time enough has not elapsed to show whether the new influence of amateur sports will universally result in improved national attitudes toward sports in general. It goes without saying that it is better for the American people to read good books than cheap books, to witness fine plays than to attend salacious theatrical performances, and in the same way certainly it is better for them to attend the best type of athletic performances.

The Commercial Aspects of Intercollegiate Athletics

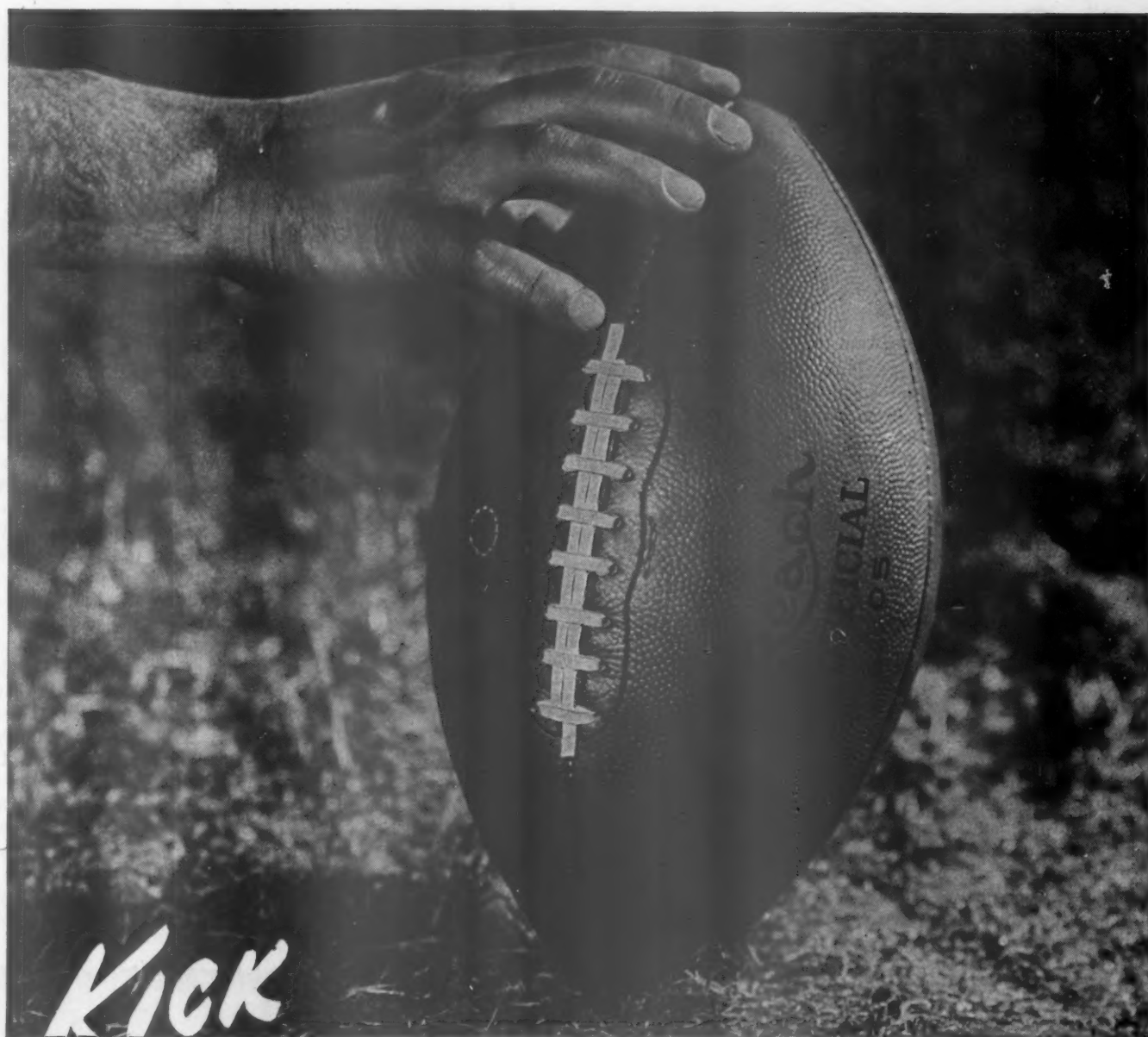
WHILE it is true that in possibly twenty-five colleges and universities and in a few of the larger high schools the athletic and physical education program is entirely financed from gate receipts collected in connection with the football games, in the balance of the educational institutions interinstitutional athletics are not self-supporting. In those colleges where the income from the games is not adequate for paying the salaries, maintenance and overhead of the athletic departments, various methods are used for making up the deficits. Sometimes entertainments are promoted for the benefit of the athletic departments. Frequently friends and alumni contribute money to make up the deficits, and sometimes the institution makes up the loss. It is a mistake to assume that, because a few of the larger universities have had financial success in connection with the management of athletics, college athletics generally are prosperous.

Since the large crowds in the twenty-five institutions, wherein athletics are self-supporting and have supported the physical education program as well, have attracted the attention of the public, and since those who complain about the commercialism of college athletics think in terms of these large crowds, it may be well to consider the question from this angle.

The playgrounds that have been established quite generally throughout the country have been financed from bonds or taxes in which case the burden is distributed among a large number of people. The question naturally arises whether it is wrong for the larger universities to finance their athletic activities from gate receipts and whether it would not be better if the athletic departments were endowed or, in the case of the state universities and the high schools, if the cost of maintenance were assessed among the taxpayers.

There was a time when a great deal was being said and written about tainted money. Some people thirty-five or forty years ago questioned the propriety of the trustees of the University of Chicago accepting gifts from the Rockefeller millions. A well-known college did reject an offer of help from one of the most successful business men in the

(Continued on page 47)



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Competitive Athletics With the Armed Forces in the British Isles

By James H. Carnahan

Assistant Athletic Director with the American Red Cross in England

COMPETITIVE athletics with the United States armed forces in the British Isles (England, Scotland, Ireland, and Wales), functioned on an abbreviated scale from the time the first company of engineers landed in Northern Ireland, until D-Day, and is still functioning for the groups stationed in Great Britain.

Original plans for competitive athletics were made by the "Stars and Stripes" athletic committee, composed of men from the American Red Cross, the Special Services Division of the U. S. Army, and the "Stars and Stripes" (American newspaper for the armed forces).

Objectives of the program were similar to those used in the United States, to promote physical development, to provide entertainment, to maintain morale, to condition the men for combat duty, and to reward them for their athletic achievements. To promote a wide field of athletic activities among the American forces in Great Britain, athletic centers were established throughout the British Isles, with the center of the activity in London. In most

JAMES H. CARNAHAN, former Normal, Illinois, Junior High School athletic director, returned to the United States in January after serving two years as assistant American Red Cross athletic director with the armed forces in the European theater of operations. While in England Mr. Carnahan qualified fifteen hundred instructors who in turn taught 90,000 Yanks combat swimming before D Day. For two years he traveled about the British Isles working in athletics with the U. S. forces, and upon his return to this country became director of water safety, first aid and accident prevention for the Chicago Chapter of the American Red Cross.

cases, these centers were in the American Red Cross clubs, City Corn Exchange buildings, or adjoining soccer fields near troop concentrations. The conditioning of athletes, as well as competitive games, were held for the men of the U. S. forces.

During the first year the American forces held competitions only in boxing and football. Because the procurement of football uniforms was impossible, and only ninety suits existed in this theatre of war, only four games of the American sport were played.

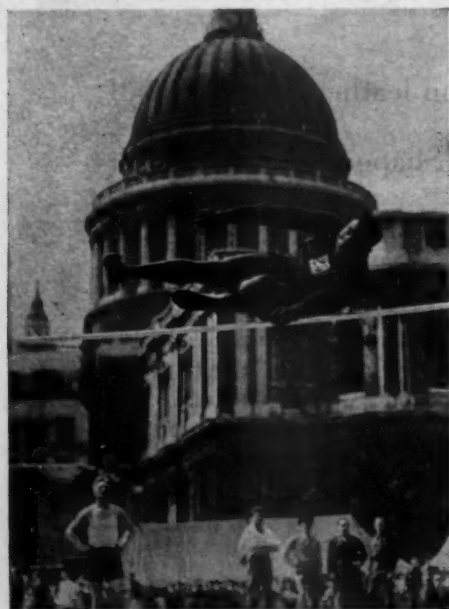
Boxing was by far the most popular sport among the men stationed in England, and continues to be the most popular throughout the European theatre of operations. The first championship tournament for the armed forces in the British Isles was staged in the spring of 1943, following preliminary tournaments throughout the theatre. The championship tournament was held in the Rainbow Corner, American Red Cross Club in London. Later, the U. S. team defeated the British Army team six bouts to five, in the Royal Albert Hall. Similar championship tournaments were promoted in basketball, with sixteen teams being brought to London for the championship.

Instrumental in the promotion of athletics during the early stages of the Yanks in England were: Major E. M. Llewellyn, of New York; and G. B. Fitzgerald, of St. Paul, Minnesota, former Notre Dame football and later athletic director at St.

Bede College, LaSalle, Illinois, and also an assistant on the athletic staff of the University of Minnesota.

The boxing program in the E.T.O. was setup under the direction of Major Sol Radam, well-known Arkon, Ohio, athletic official, then athletic director for the "V" Corps. Officials for the program were secured from the Army ranks and American Red Cross personnel, and included such men as: Foster Blaisdell, Waco, Texas, a member of the Southwest Coaches Association; Rolly Slater, of Denver, Colorado, former professional football player with Brooklyn; Frank Kammerlohr, of Great Falls, Montana; Phil Slinker, of Des Moines, Iowa; William Craig, of La Grange, Illinois; Pat Dawson, of Janesville, Wisconsin; J. H. Haldeman, of Des Moines, Iowa; Jim Kelly, of Manistique, Michigan; and Lawrence Saltis, of Akron, Ohio.

Basketball championships, both during the first year of competition and during



Sergeant Daniels making a winning 6-foot jump in an Inter-Allied Invitational Meet in the bombed district near St. Paul Cathedral, London.



A 20-foot broad jump at the 9th Air Force Track Championship, Polytechnical Institute Track, somewhere in England.



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Put Bike Tape to the test on your own men and watch its performance. Tape an ankle . . . strap a knee or a shoulder—and you'll discover six improvements you have long wanted:

Adheres instantly and holds firmly.

Maximum adhesion at skin temperature.

Less allergic. Fewer athletes are susceptible to the new formula. Proved by tests.

Long life. Withstands age, climatic conditions, deterioration far better than previous tapes.

Reduced creep. New "thermo flow" elastic mass permits skin movement but cuts down creep.

White mass. The result of special care in selecting ingredients free from impurities.

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At the left, Captain Harrison D. Kohl, Des Moines, Iowa—winner of the mile run when the Yanks defeated Oxford University.

this year, were held at the Royal Albert Music Hall in London, with sixteen teams participating. Here a rug one hundred feet long and sixty feet wide had to be removed from the floor of the hall, and portable baskets installed. Bed mattresses were used as improvised padding for the standards of the baskets installed at the ends of the playing floor. Individual letters were written to the families who had life-long box seats in the hall, asking for permission for the service men to use these seats during the tournament, which was free of charge to the members of allied troops. Large crowds attended all sessions.

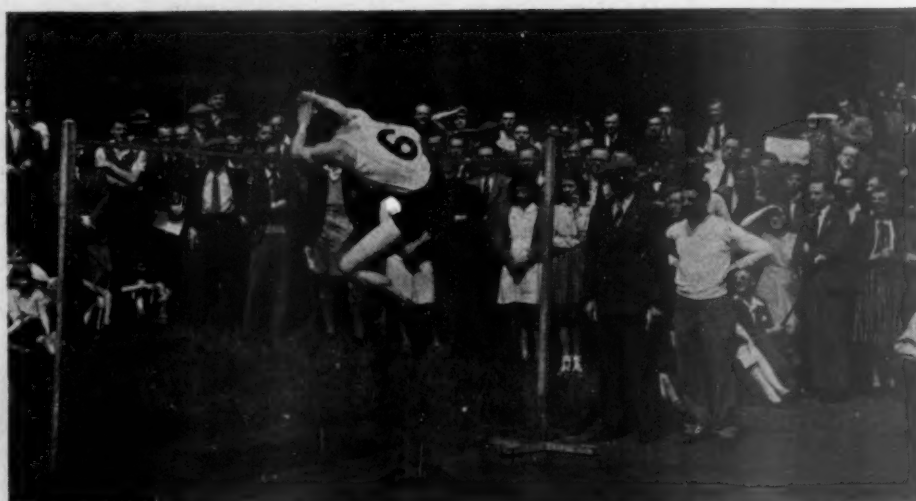
Tom McDougal of Los Angeles, California, a member of the athletic department in England brought back a big laugh to the engineers department, when it was found the engineers in the Royal Albert Hall had not only installed shower baths for the Americans but had also placed a bath tub under each shower so the dough-boys might be comfortable while bathing after the game.

The swimming championship of the U. S. Army was held at the Marshall Street Baths in London, with 250 participants. The 8th Air Force Championships were held at Maidenhead, and the 9th Air Force held their championship in the indoor pool at Slough. Instrumental in the promotion of swimming in the E.T.O. were Major John McNally of Baltimore, Maryland, former swimming coach at Johns-Hopkins University; Major M. Ackley, of Pittsburgh, Pennsylvania, former assistant coach at Carnegie Tech University; and Captain William B. White, of Los Angeles, California.

Outstanding swimmers during the past



At the U. S. Basketball Championships, Royal Albert Hall, London, England.



Sergeant Red Ettinger, 8th Air Force Gunner, former University of Kansas athlete, breaking Oxford College high-jump record in the Tri-Allied meet held at Oxford, England.

two years include Lieutenant Fred Gass, of Long Beach, California; Captain Ted Drysdale, Detroit, Michigan; Captain William Garvey, of Wichita, Kansas; Sergeant Robert Mohr, of Detroit, Michigan; Sergeant Hyman Lederstein, of Pittsburgh; and Andy Diamantopolis, of Pawtucket, Rhode Island. Honors in the diving field were divided among Colonel Marshall Wayne, of Miami, Florida; Captain Kenneth Willard, of Chicago, Illinois and Northwestern University; and Captain Walter Rotkis, of Westville, Illinois and the University of Illinois. The team composed of the American swimmers won twenty-one out of twenty-two interallied swimming meets.

Tracks meets were held throughout the theatre, and an E.T.O. track team was chosen at the Polytech Institute Track in London, and later defeated the R.A.F. and Oxford University at Oxford. Lieutenant Tom Bowie, formerly affiliated with Chicago University and a member of the National Coaches Association and former coach at the University of Creighton, was one of the outstanding track coaches, as well as an authority on all sports throughout the 8th Air Force competitions.

In one division nine hundred boxers took part in the boxing tournament, and one hundred basketball teams participated in basketball on outdoor courts, with trophies and medals awarded to the winners in each group.

Officials for sports in the theatre were no problem, since some of the best officials in our country were in the armed forces there. Fred Corcoran, P.G.A. National Golf Team manager, completed a tour of installations in England during 1943, and golf became very popular for the men who were stationed near the courses, especially in Scotland.

All of the army athletic men in the theatre believed in, and insisted upon, competitive sports for the men in their

(Continued on page 30)

CONVERSE COOPERATES with N.C.A.A.

**VOLUNTARILY DISCONTINUES
BASKETBALL RATINGS;
PRESIDENT SMITH WIRES
MESSAGE OF APPROVAL**

IN A MOVE voluntarily initiated by Converse Rubber Company and Dick Dunkel, the publishing of basketball team ratings in advance of games was dropped in the three final issues of the Converse-Dunkel Service for the current season. The following telegram received from President Smith of the N.C.A.A. applauded this voluntary action by Converse.

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1945 FEB 5 PM 6 38

THE OFFICIALS OF THE NCAA ACKNOWLEDGE THE COOPERATION OF THE CONVERSE RUBBER COMPANY AND R C DUNKEL ORIGINATOR OF THE CONVERSE DUNKEL BASKETBALL RATING SYSTEM IN VOLUNTARILY DECIDING TO DISCONTINUE PUBLISHING TEAM RATINGS. WE APPRECIATE THAT COLLEGE COACHES AND ATHLETIC DIRECTORS FIND THE SYSTEM INVALUABLE BUT WE CONCUR WITH CONVERSE THAT IT IS WISE TO ELIMINATE ALL RATINGS TO PREVENT THEM FROM POSSIBLY GETTING INTO THE WRONG HANDS. WE CONSIDER CONVERSES VOLUNTARY ACTION IN LINE WITH THE COMPANY'S PAST RECORD OF CONTRIBUTING TO THE FURTHERANCE OF CLEAN AND BETTER BASKET BALL.

WILBUR C SMITH MD PRESIDENT NCAA.

SYMBOLS

DL = Day Letter

NL = Night Letter

LC = Deferred Cable

NLT = Cable Night Letter

Ship Radiogram

END-OF-SEASON RATINGS TO BE PUBLISHED

The complete Converse-Dunkel Summary with final ratings for 1944-45 of all College and Service Teams will be published as soon as possible at the end of the season. It will be mailed to all names on the present Converse mailing lists. Watch for it!

**CONVERSE RUBBER COMPANY
MALDEN 48, MASSACHUSETTS**



CONVERSE
Chuck Taylor
ALL STAR
BASKETBALL SHOES

THE STATE OF *A Leader in*

THE FOLLOWING BILL HAS BEEN INTRODUCED

To amend the executive law, in relation to creating in the executive department, a state commission on physical fitness, defining its functions, powers and duties and providing for the appointment and compensation of its officers and employees, and making an appropriation therefor

1. It is hereby declared that:

a. A high degree of physical fitness is essential for the existence of our nation, no less in peace time than in time of war;

b. Failure to provide adequate physical training since World War I has accounted for, in large measure, weakness in physical condition and lack of motor skill and has attributed to great loss of life and material, and to needless expenditure of funds;

c. Any sound plan for insuring a reasonable degree of "preparedness always" inevitably calls for basic and universal physical training of our youth, both boys and girls on a continuing and graded progression, beginning at an early age and leading to participation in active recreation in later life;

d. The safety, happiness and general welfare of all our people demand that the failures of the past to provide suitable and adequate physical training shall not be permitted to continue or recur in the future;

e. The state physical fitness and recreation program, developed by the division of physical fitness of the state war council and exemplified to the states and the nation during this emergency must not be permitted to lapse at the end of the war but must be promoted, studied, and expanded to serve the post-war needs of our people and especially youth, returning veterans and industrial workers.

2. It shall be the primary purpose of this article to develop and maintain an efficient motor fitness-strength, athletic skill, stamina and morale in the citizenry of the state, and the powers and duties of the commission on physical fitness created by this article shall extend to this end.

STATE COMMISSION ON PHYSICAL FITNESS. 1. There is hereby created in the executive department a state commis-

sion on physical fitness. Such commission shall consist of seven members, to be known as commissioners, who shall be appointed by the governor, by and with the advice and consent of the senate, and one of whom shall be designated as chairman by the governor. The term of office of each member of the commission shall be for four years, provided, however, that of the commissioners first appointed, two shall be appointed for a term of two years, two for a term of three years, and three for a term of four years. Of such members, one man and one woman shall be professionally trained and expertly qualified in physical training, one member shall be professionally trained and expertly qualified in the conduct of competition in athletic sports and one member shall be an honorably discharged veteran who shall have served in the armed forces of the United States. Any member chosen to fill a vacancy occurring otherwise than by expiration of term shall be appointed for the unexpired term of the member whom he is to succeed.

2. The members of the commission shall receive no compensation for their services, but shall be reimbursed for their expenses, actually and necessarily incurred by them in the performance of their duties.

3. Any member of the commission may be removed by the governor for inefficiency, neglect of duty, misconduct or malfeasance in office, after being given a written statement of the charges and an opportunity to be heard thereon.

GENERAL POWERS AND DUTIES OF COMMISSION. The commission shall have the following functions, powers and duties:

1. To promote and develop the physical fitness of the inhabitants of the state through physical training, athletic sports, recreation, camping, and kindred services.

*"Boost the
War Memorials
that live
campaign"*

Keep Fit through
The ATHLETIC
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209 S. State St., Chicago, Ill.

NEW YORK

Physical Fitness

INTO THE NEW YORK STATE LEGISLATURE

2. To encourage, develop and co-ordinate all activities relating to the physical development of the people and the maintenance of fitness through sports, athletics, gymnastics, swimming, hiking, camping and other similar pursuits.

3. To encourage the provision of facilities for the conduct of physical fitness activities.

4. To encourage and provide for the development of physical fitness through the amelioration of physical defects by physical exercise.

5. To appoint a qualified administrator to conduct its affairs and such officers and employees as it may deem necessary, fix their compensation within the limitations provided by law, and prescribe their duties.

6. To conduct such studies and to obtain such data and assistance from all governmental departments and agencies as will enable it properly to perform its functions and to effectuate the purposes of this article.

7. To obtain upon request and utilize the services of all governmental departments and agencies.

8. To adopt, promulgate, amend and rescind suitable rules and regulations to carry out the provisions of this article.

9. To render each year to the governor and to the legislature a full written report of all its activities and of its recommendations.

The Athletic Institute believes that state legislation of this type is essential in order to avoid a repetition of our failure in physical fitness following World War I. Too little thought has been given to physical fitness in America, in the twenty-three years prior to Pearl Harbor.

The appalling need for increased physical fitness of the citizens of our nation is constantly being revealed through the National Selective Service draft rejection statistics and Army and Navy findings that few of the draftees are in good physical condition.

In the past the schools have not been able to meet the needs of physical fitness, nor can they meet these needs fully in the future. Without doubt, the public and private educational institutions have a large responsibility in this field, but certain inherent limitations would prevent overall accomplishment of the desired objectives.

There is at present no single permanent state agency that can assume the responsibility of meeting the total physical fitness needs of all its inhabitants, including returned veterans.

Some separate agency, similar to a State Commission on Physical Fitness, working through existing agencies, is necessary in order to effectively carry out adequate programs. America must not be caught napping again!

STATE PHYSICAL FITNESS FUND. 1. The commission, with the approval of the governor, shall have the power to receive sums of money either by way of grant, bequest, donation or otherwise for the purposes of this article. All such moneys and those appropriated by the state or received from federal funds for the purposes of this article shall be credited to a special account to be known as the "state physical fitness fund." The commissioner of taxation and finance shall have custody of such fund. Moneys shall be payable out of such fund, after audit by, and on warrant of, the comptroller, upon vouchers certified or approved as prescribed by law.

2. The sum of seventy-five thousand dollars (\$75,000), or so much thereof as may be necessary, is hereby appropriated, out of any moneys in the state treasury not otherwise appropriated, to the state commission on physical fitness created by article fourteen-A of the executive law, as added by this act, for its expenses, including personal service, in carrying out the provisions of such article. The moneys, hereby appropriated, shall be paid out of the state treasury into the state physical fitness fund established by section one hundred eighty-three of the executive law, as added by this act, and shall be payable from such fund, as provided by such section.

3. This act shall take effect immediately.

Athletics and Recreation
INSTITUTE, Inc.
ORGANIZATION

Col. Theodore P. Bank, President

THEODORE P. BANK
President

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A Few Basketball Plays of the 1945 Season

(Continued from page 8)

player and rebound man.

Diagram 7. If 4 advances the ball, the continuity is as follows: 4 passes to 5 and screens for 5 as 5 dribbles around the screen in an effort to get a one-hand shot. The same variations work on the other side of the court.

In the out-of-bounds play, shown in Diagram 8, players 1, 2, 3 and 4 form a box. As 5 gives the signal, all players move as shown, 1 screens for 2, and 4 screens for 3. The 4-3 screen provides a second screen for 2 as 5 passes the ball to 2.

In the out-of-bounds play, Diagram 9, feinting and footwork are very important. One and 3 feint in one direction and cut out away from the goal as 4 cuts into the middle. Two feints in one direction and cuts his man off of 4 and receives a pass from 5.

Diagram 10 shows an out-of-bounds play on the side line. One has the ball out, 2 screens for 1, and 1 passes to 5. Player 4 screens for 3 who feints to go for the ball and goes behind the screen to receive a pass from 5. Player 5 has the option of passing to 1, as he cuts in, if he is open.

There are several possibilities in the set-up, shown in Diagram 11. One is a good corner shooter so the ball may be passed to 4, and 1 jumps in bounds and shoots. Or as players 4 and 5 cross over, 5 screens for 3, and the ball is passed in to 3. Player 5 should yell for the ball and make his opponents think he is to receive the pass.

In the out-of-bounds play, shown in Diagram 12, 2 is the tall player and 5 is the good, long, goal shooter. Players 3 and 4 cross behind 2 and go in. If a left-handed shooter is available, he should play the 4 spot.

Diagram 13. In this set-up, 5 is a good spot-shot and 4 stays out to screen as 2 and 3 break to the sides of the goal as indicated. Player 1 tries to pass to the open man.

The objective in the out-of-bounds play, shown in Diagram 14 is to get a good spot-shot for player 3, or, as 2 and 4 cross, to get one of these players open when he cuts in. Player 5 keeps his man busy by faking and feinting to cut in to the goal.

The Javelin Throw

(Continued from page 11)

through the air, it will be found that it is because the tail is being whipped across the body in the final step of the throw. It is not being pulled straight forward.

OUR JOB DOESN'T END
WHEN THE *Fighting Stops!*



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Shipment home and mustering out may take many months. The demand for sustained activity and entertainment for these impatient men will be a major problem of every officer. To help insure against this smoldering discontent and unrest, Rawlings is shipping a large share of its production of athletic equipment to our soldiers and sailors in every corner of the globe.

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The third Army-Navy "E" Award
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6. Do not fight yourself on the run-through. Make the run as easy and smooth as possible.

7. The thrower will get elevation by dropping his arm and shoulder at the finish of the back swing at the start of the throw.

8. The whip of the arm does not start

until the javelin is even with the ear.

9. In learning to throw the javelin, a boy should start from the throwing position and work additional phases of technique as the arm is developed.

10. Exercises should be taken to strengthen the muscles of throwing hand and arm.

The Eyes Have It in Baseball

(Continued from page 9)

pitching control which is all important.

2. The catcher may use this as he attempts to fool the baserunners as he throws to catch them off base. Experienced coaches will tell you that their catchers vary in accuracy when they face the pitcher and yet throw to either first or third base. Some do this with ease when throwing to first base but are inaccurate when trying it to third base. Other catchers are just the reverse in their accuracy.

There is no doubt that the experienced catcher who can use his head both as a means of faking (a physical use) and as a container of smart brain tissue is worth several players sitting on his bench or

parked out in the outfield. The catcher who can fake with his head and thus lead a runner to think he is returning the ball to the pitcher and yet is throwing accurately to catch him off base is just as valuable to the baseball team as the basketball player who fakes with his head and body movements to pull the opponent out of position.

3. This information is useful to every young man preparing to enter the military service where he may be exposed to considerable basic training in drilling. By its use he realizes that he can “guide right” or “guide left” without turning his head as he marches back and forth.

Make Broad Jumping Safer

(Continued from page 6)

The first item in training is the warm-up. Here is a standard list; it may be varied somewhat.

1. Jog one to two miles, no more than a quarter in one stretch. Start slowly, just “kissing the track” or dancing lightly on the toes. Make each lap a bit faster. Do some of the exercises between laps.

2. At least ten minutes of exercises. Start each exercise slowly and increase in vigor gradually. Be sure to include back bends, front bends, twists, knee bends, push-ups, and bouncing on the toes. This list may be amplified by any wide-awake individual to get variety and secure suppleness and flexibility in all parts of the body.

3. Practice easy jumps by walking to the edge of the pit and leaping high, not far. This is the way to perfect the hitch-kick.

4. Jog or stride through the runway and take off easily, for height, from a practice board no more than four or five feet from the pit.

5. Practice a full run to a regular board. Practice a full run and three easy jumps. Now you are warmed up.

A beginner should go no farther than Item 3 in the preceding list for a few weeks. He should, however, follow the sprint or hurdle work-outs daily. As he gets stronger, he adds Items 4 and 5. Item 5 completes the warm-up. The full-distance jump is used only once a week.

If the jumper experiences any leg or ankle soreness, his warm-up jumps should be taken from the grass or dirt at the edge of the pit. Sometimes it is beneficial in the warm-up jogging to stay on the grass and do a light spring every four or five strides. This kind of practice exercises the jumping muscles and tendons without strain.

When a coach has a boy who never did the hitch-kick, he should try having him hold to a rope (See Illustration 1), while going through the movements: a lift from the toe, one kick (pawing action) with each leg, and a relaxed landing with feet even. It is awkward at first, but if a boy will spend two minutes a day trying this exercise on the grass, he will perfect it. Once the kick is mastered, it usually becomes automatic and can be forgotten. It is, next to speed, the most important element of broad-jump training. The exercise may be executed while the boy is walking around on the grass after the warm-up. The next stage (daily) is to jog easily to the edge of the pit and execute the hitch-kick. This must be done easily and relaxed, and not too often. Jumpers will need constant reminders not to jump for distance, but to imagine they are high jumpers, and to see how high they can lift themselves. If they can get height, the distance will come when a full-length run and full speed are used.

To teach the landing, a good method is



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WRITES MR. P. . .

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A-1

to have the jumper sit on the edge of a low bench and tuck his knees up, then reach out full length to the ground, and as his feet touch, *pull* himself forward off the bench and over his feet, as shown in Illustration 2.

Every coach has his own method of working out a broad-jump approach. I prefer one check mark only, and a great deal of practice. If the jumper tries a leap when his stride is wrong, and he is forced to stretch for the board, he is vulnerable to injury. The same is true when a boy tries to use too short a run and is still fighting for speed when he tries to jump. The ideal approach is long enough for the jumper to attain full speed at least three strides *before* the take-off, and to do it with a gradual pick-up, relaxed, and smooth all the way. Jesse Owens, a 9.4-sprinter, ran about 150 feet for his approach; Dallas Dupre, a 9.9-sprinter, ran 140 to 150 feet to jump 24 feet 8 inches; Ralph Tyler, the 1944 National Collegiate champion, a 10.3-sprinter, with a slow pick-up, ran 140 feet to jump 23 feet 4 inches. Something that does not seem to be generally realized is that the last stride *before* the take-off should be slightly shorter than average, so that the foot is *under* the body for the push instead of reaching.

All through the early weeks, a jumper should spend ten minutes a day doing hitch-kicks, and five or ten minutes a day doing practice approaches to the board.

This is *after* his warm-up and sprint or hurdle assignments. After the third week, the jumper should jump for distance *once* a week, taking no more than six jumps. If his first three or four are good, he should stop. In the distance trials, he should try to get a perfect, full-speed, relaxed approach, then concentrate on height. If his preparation has been adequate, he can cut loose with a good jump, and will run no more risk of injury than in a sprint race.

It is a good idea for all sprinters and hurdlers to learn to jump, because it is so easy to take a jump or two between races. For instance, in 1943 Dallas Dupre III of Ohio State won the Western Conference Broad-jump title with just one beautifully executed leap in the preliminaries. Dallas had been bothered in the winter season with a recurrence of an old high school hamstring injury. He knew that he would be in the navy in the summer, and wanted to win a conference title before leaving, so he began a campaign of careful training and leg exercises. By spring season, his leg was in pretty good shape. At the conference meet preliminaries, he warmed up thoroughly and worked out his approach carefully, because he knew he might not be able to jump more than once. That first leap was 24 feet 1 inch; he stopped right there. He went on to win the 100 and 220, and was leading over the fourth hurdle in the 220 lows when the weak leg finally buckled.

Some Phases of Defensive Baseball

(Continued from page 15)

so that the throw being made to him will be on a line. The throw to the relay man should never be a hop throw. On the other hand, the throw in by the relay man should be low, on a line, and should come in to the receiver on the hop. One reason for this is that the high throw takes too long. Another is that the low throw can be cut off and a play made on a baserunner other than the one for which the throw was originally intended.

If there is an unforgivable sin in baseball, it is the outfielder who loafs in recovering a ball hit through him, past him, or over his head. This is the time to really hustle and it is one of the few cases when a player should be benched right then and there, regardless of his ability. His lack of spirit will cost ball games sooner or later and destroy team morale.

We have been reading the Athletic Journal ever since the very first issue was published. If you read it as we do, you will agree with some of the things brought out in various articles and disagree with others. Some things that you have known and forgotten will simply be refreshed in your memory. The pay-off, however, will come if you find one little thing that is new, or one little statement or idea that will strengthen your opinion on the best way to execute or teach some skill or technique in a game. Then the time spent has been worth while. That is the way we have read the Athletic Journal and we hope you will find such an item in this article. This defensive approach, assuming that other departments are not neglected, particularly the fundamentals, may prove mentally stimulating.

Competitive Athletics With the Armed Forces in the British Isles

(Continued from page 22)

commands, from the time the first company arrived in England throughout the duration of their stay in the isles. Lieutenant Tom Bowie, coach of the 56th fighter

group, 8th Air Force, defeated the scarcity of materials and supplies when he wrote to the coach at the University of Notre Dame; he received from that institution

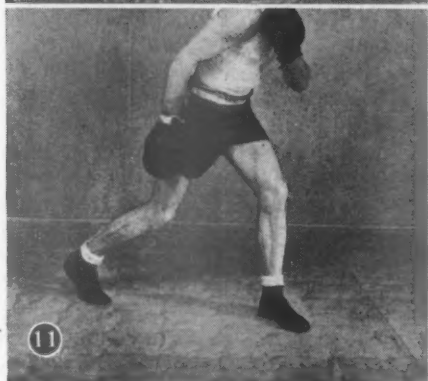


Illustration 9—Side Step Right (First Step). Note by the center line on the mat that the body weight has shifted, and that both toes are pointed in the direction in which the boxer is going. The right foot which is now the front foot comes off the floor first.

Illustration 10—Side Step Right (Second Step). Note the line on the mat now. The boxer's position has shifted to a 90-degree angle to the right, and he is now in a position to counter his opponent whose path of attack would be along the line on the mat.

Illustration 11—Side Step Left (First



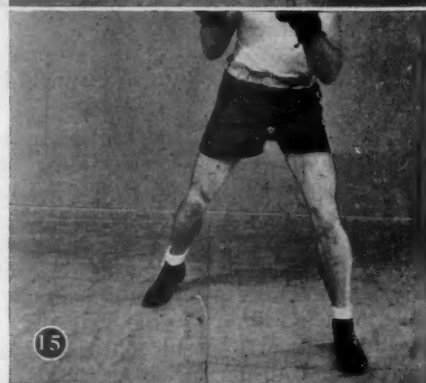
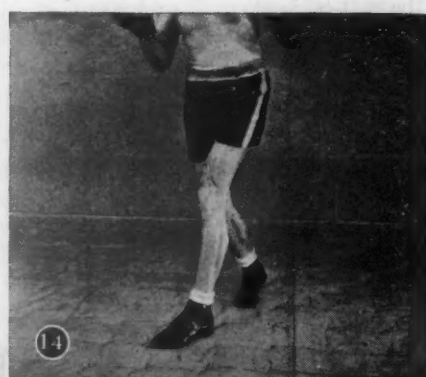
Step). The boxer's body and toes have turned to a 90-degree angle to the left. The left foot now becomes the front foot and, therefore, is the first off the mat. Note the direction the toes are pointing.

Illustration 12—Side Step Left (Second Step). The whole body position has changed to a 90-degree angle. In this maneuver the left foot becomes the pivot foot, and the right foot is whipped around 180 degrees. The boxer is now in a good position to counter his opponent who rushes by.

Illustration 13—Correct Footwork for Circling Right. The right foot now becomes the front foot as that is the direction in which the boxer intends to go. Note the center line. The head, body, and right foot of the boxer have been shifted several inches to the right. His next move will be to slide the left foot an equal distance to the right which will return him to a balanced stance. The boxer may decide to repeat this maneuver several successive times to gain an advantageous ring position.

Illustration 14—Incorrect Footwork for Circling Right. The boxer has first shifted his left foot to the right, thereby crossing his legs. Should his opponent advance at this point, the boxer's left leg would be tripped by his right leg, thus placing him off balance and vulnerable.

Illustration 15—Correct Footwork for



Circling Left. The front left foot is moved slightly to the left first, as the head and body are so moved. The rear foot is then moved the same distance. The boxer may repeat this maneuver to gain a more advantageous lateral position.

Illustration 16—Incorrect Footwork for Circling Left. Note that the rear foot is first moved behind, crossing the front foot. Should the opponent advance at this point the boxer's front foot would trip over his rear foot in his attempt to retreat. This would put the boxer off balance and would give his opponent a definite advantage.

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the cast-off basketball equipment, including shoes, suits, and sweat clothes. Baseball as well as softball were, also, played throughout the theatre.

Wherever the American soldier is, he is trying to sell a little part of American sports. On one occasion, five thousand Americans and some three thousand English service men were attending a baseball game at the White City Stadium in Lon-

don. With the score in favor of the Air Force, when an English attendant announced tea was being served, every Englishman left the stadium. You just can't keep the English away from their tea. The air corps won 1-0.

Competitive sports are continuing in Great Britain now. Recently the United Kingdom championships in basketball for the U. S. forces stationed there, were held

in the Royal Albert Hall, London, and the Tea-Bowl football game was held at the White City Stadium.

Bombs, lack of gas, material shortage in every article, and the robot "buzz bomb" terror—all these, competitive athletics have withstood among the allied forces in England. Recently 80,000 people walked, cycled, or drove horses to see the Scotland versus England soccer game near London.

Canada Has a Plan

By Robert F. Mines

Instructor in Physical Education, Booth Memorial High School, Prince Rupert, B. C., Canada

IN OUTLINING the critical health situation to be found among the youth of the United States, William A. Gerber wrote in the January issue of the *Athletic Journal*, "We need a plan which will reach out and gather in every young man and woman in this country, a plan which will apply the yardstick of health and development to these young people and then provide the necessary physical education, health, and corrective program called for." Mr. Gerber outlined a proposed plan for raising the standard of national fitness, involving one year of compulsory training for all the young men and women of the country during their seventeenth year, this training to be given at camps similar to those organized by the C. C. C. a few years ago.

While my knowledge of the situation in the United States is somewhat limited, I am inclined to think that such a plan would not meet with popular approval. It seems to me that there would be three principal objections to it.

In the first place, while the public may be able to see the direct connection between military training for young men and the power of the United States to resist aggression in post-war years, the indirect connection between such power and a year's training in physical education and handicrafts for both young men and women—such as Mr. Gerber proposes—may not be so obvious. Since it is unlikely that compulsory training will be sanctioned unless it is for the purpose of defense, the chances are that general approval would not be given camps of the type Mr. Gerber advocates.

Moreover, even during this time of peril, the compulsory training of young women has not been adopted. There seems to be widespread prejudice against such a move. It seems to me, therefore, that it stands no chance of being put into force in post-war years.

The third objection to Mr. Gerber's proposal may seem a minor one, but in my mind it possesses a certain psychological importance. Youth camps have been brought to a low level by the Nazis who have used them to impress their peculiar

theories upon young people. In the minds of many people, youth camps are associated with the Nazis, and for this reason there will be strong protests against their establishment—and the use of compulsory attendance to fill them—in the United States.

On the other hand, it is obvious that Mr. Gerber is correct when he says that the standard of health prevalent among our youth must be raised to a higher level, and that some plan, financed by the federal government, is necessary to accomplish this. In this connection, I would like to bring to your attention a physical fitness plan now being put into operation in Canada.

This dominion was considerably dismayed to find that a high percentage of the young men examined for military service had to be rejected because their health was not of a sufficiently high level for them to undergo the necessary training. We realized that it was necessary to adopt strong measures if we were not ultimately to become a nation of "4-Fs." As a result, parliament authorized the establishment of a National Fitness Council.

This council is composed of a director and one representative appointed by each of the nine provinces. Only the director receives a salary. Each province is to be responsible for the administration of the physical fitness plan within its boundaries, following the general plan laid down by the national council. The dominion and provincial governments each contribute toward the cost of the plan.

The National Fitness Council hopes to raise the standard of health in Canada through mass participation in athletics. The benefits to be derived from taking part in sports have been emphasized frequently in this magazine and there is no need to repeat them here. The point is that a strong effort is going to be made to get every Canadian—even the moderately young and old—to participate in athletics. In the past we have, like the United States, tended to remain a nation of spectators. This, the National Fitness Council hopes, will definitely not be the case in the future.

At the present time, facilities are not

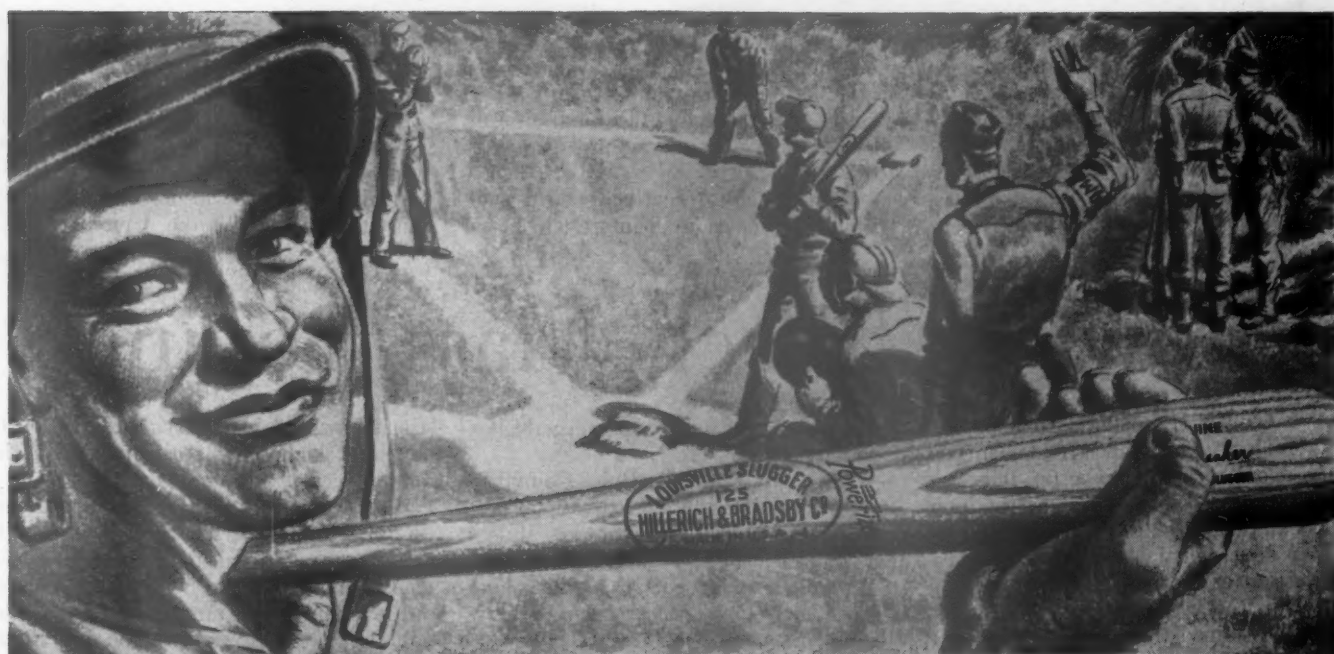
available for the widespread introduction of athletics. Our aim, is, however, to provide a recreational center for every community in Canada. At least one provincial premier, the Honorable T. C. Douglas of Saskatchewan, has gone on record as favoring the erection of these as memorials to those who have fallen in this war. Rather than monuments and statues—which are decorative but of no use—we hope to see built community centers for "teaching our youth the ideals of clean living, clear thinking and physical fitness," as a recent advertisement in this magazine expressed it.

Canada will, of course, need a large number of men and women to administer such a program. Many of them, particularly in the rural areas, will have to serve in a part-time capacity at little or no pay. Will such people be available? We believe so. Many will be returning from the armed forces where they have been serving as physical training instructors. Administering a civilian athletic program will prove far different from what they have been accustomed to doing, but for those and others who lack the necessary training, special summer courses will be available.

It will be noticed that I have made no mention of compulsion in connection with this program. As a matter of fact, each person who participates in the activities, sponsored under this plan, will do so on a voluntary basis. We believe that to participate in some form of physical activity is natural for the individual and that, given the opportunity and a certain amount of encouragement, he will do so.

There may be some who will claim that this program is so lacking in a practical basis that it will never succeed. Canada's answer to that is: It already has! The dominion's program is modelled on one that has been carried out during the past dozen years in the province of British Columbia.

Twelve years ago the Provincial Recreation Association was begun in this province with the purpose of providing recreational facilities for British Columbia's unemployed. Branches of it sprang up all



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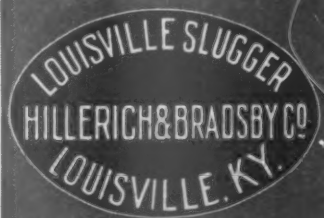
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over the province. Gymnasiums or substitute structures were rented, donated, or erected. Summer courses were held to train instructors. The movement has naturally had its ups and downs, but its growth has been steady during the years in which it has functioned.

Canada does not intend to rely en-

tirely upon such a plan to make its people more healthy. Attention is being given to the matter of providing better medical services to the rank and file of our citizens. The Manitoba division of the Canadian Red Cross Society and the Saskatchewan government have recently appointed nutritionists to develop an interest in better

health through more adequate diets. Health and physical education are receiving more emphasis in our schools.

The National Fitness Program will, however, play one of the most important roles in raising the standard of health in Canada. What it will do for this dominion, it may do for the United States.

How To Teach Mass Boxing

ALTHOUGH boxing is one of our oldest sports and fundamentally close to man's make up, it is one of our youngest sports as far as the high schools and colleges are concerned.

As an educational activity it developed first right after World War I. Boxing was stressed in the war camps, and the popularity it attained there carried over into the schools and colleges when the war was finished.

Unfortunately the only rules, equipment, and leadership available at that time came from the professional field. They were not adapted to school and college conditions. During the early trial and error period, college boxing was not a great success. It was not truly educational and it made many enemies, particularly among college people. It came into bad repute and seemed to be on its way out.

Just when college boxing was about to take the count, along came a group of educators, trained and experienced in physical education, who realized that college boxing, if properly administered, could be a very desirable and worth-while sport. No sport has ever undergone such a thorough job of house cleaning. These men first organized themselves into what is known as the National Collegiate Athletic Association Boxing Rules Committee.

They formulated rules and made a rule book. They discarded all of the objectionable features which they had inherited from the professional game. Each new rule was given a double test. The first question was whether it was good for the boy? If it was, it was accepted; if it was detrimental, it was rejected. The second test was educational. If the problem involved could be justified educationally, it was endorsed and if not, it was excluded.

Many of the decisions made in the early days were ridiculed by the seasoned fight fans, but subsequently history has proven the wisdom and forethought of the men who made them.

The committee next embarked upon an educational campaign among the so-called boxing coaches. Some were dismissed, some were advised to go elsewhere, and some were educated up to the new standards. The undesirables have dropped by the wayside and their places have been taken by young men trained in physical education and saturated with the philos-

ophy of true amateur intercollegiate boxing.

The next move of the Rules Committee was to formulate the most drastic athletic rule any sport has ever known. Rule 1, Section 3, reads as follows:

"Anyone who has participated in a public boxing contest after reaching his sixteenth birthday, whether an admission was charged to the contest or not, except one carried on between colleges, preparatory schools, or high schools, shall be ineligible to participate in college boxing."

This rule prohibits the so-called successful boxing coach from buying up National A. A. U. or golden glove amateur and semi-pro boxers some of whom may have had from one hundred to two hundred bouts before entering college. Since there was practically no high school boxing when this rule was passed, the college boxing coach found he had to develop his talent from green material.

Another step forward was taken in 1938 when boxing coaches gathered at Charlottesville, Virginia, and organized themselves into the National Collegiate Athletic Association Boxing Coaches Association. Today, there is a very warm and co-operative spirit between the rules committee and the coaches association. Much real progress has been made since these two groups have joined hands.

Although high school boxing was slow to start, it has made tremendous strides in the past few years. About a decade ago, a few high school principals introduced interscholastic boxing, but it was soon dropped from the program. It could not qualify as an educational effort. The only coach available was the local barber who was probably an ex-professional and who was usually interested in the high school program only as a source for professional talent. The only rules available were professional or semi-professional in character. Proper equipment, facilities, and supervision were all lacking. It is easy to understand why interscholastic boxing failed at that time.

The picture has changed. Ex-college boxers are now available as coaches. College coaches gladly volunteer their help and supervision to nearby high schools. The rules committee has set aside a section in the rule book covering weights and rules for high school boxing. An educa-

tional program is now being carried on to acquaint high school principals with the advantages of this new sport.

Probably one of the strongest arguments in favor of high school boxing is that it has a natural appeal to boys of high school age. Schools that do not sponsor at least an intramural program, fail to satisfy the ambitions of many boys. The only alternative then is the semi-professional or professional field. Many boys are thus forced into the atmosphere of professional boxing because the high school program of physical education is incomplete.

Authorities on world affairs seem to believe that the present conflict will continue for some time. Army and Navy officials are very much concerned about the physical fitness of the high school boy of today who is destined to be our soldier of tomorrow.

Since a program of mass boxing has already proven its value in the training of soldiers, sailors, marines, and aviators, it logically follows that intramural high school boxing is consistent with our national defense program.

It is of little value to the United States if just a few of its young men become skilled boxers. It is very important that all of our young men receive at least elementary instruction.

Since many state programs are being planned some suggestions may be found of value in the following day by day progressive program.

This program is but a suggestion for boxing instructors. It is impossible to establish a program that will fit every need because the problems vary considerably.

Because of the physical and psychological contributions of boxing, a thirty or forty-minute daily program of group boxing should be given to each individual until he has completed this basic course. If daily drill is not feasible because of administrative problems, the same number of lesson plans may be given by extending the program over a longer period of time.

Should the instructor find it imperative that every man receive boxing instruction at one time, and, in case there are not enough boxing gloves and other equipment for the total number, the group may be divided into two, three, four or five sub groups, each working on a special as-

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signment. The instructor with the help of his assistants might have the following activities going on simultaneously:

- Group 1. Calisthenics
- Group 2. Shadow boxing
- Group 3. Rope skipping
- Group 4. Boxing drills with gloves
- Group 5. Boxing with gloves

At five or ten minute intervals these groups may rotate training maneuvers in order that every man may get a well rounded training program.

Such organization would extend the suggested course over a longer period of time.

I. First Period

A. Introductory Period

1. Instructor lectures and demonstrates from platform
 - a. Use loud speaker
2. Brief explanation of course content
3. Explanation individual equipment
 - a. Skipping ropes
 - b. Rubber mouth guards
 - c. Training uniforms

B. Classifying men by weights

1. Use marching nomenclature
2. Delegate responsibilities to assistants
 - a. On succeeding days report to specified place with definite partner at definite time

II. Second Period

A. Introduction of rope skipping—half period

1. Men should skip rope each succeeding day to warm up

B. Stance

1. Lecture and demonstrate
2. Individual practice

III. Third Period

A. Review rope skipping and stance

B. Demonstrate correct and incorrect advance

1. Have men advance forward some distance and return
 - a. Done by command "Advance"

C. Demonstrate correct and incorrect retreat

1. Have men retreat backward some distance and return
 - a. Done by command "retreat, retreat, etc."

D. Combine the advance and retreat

1. Men should alternate correct advance and retreat
 - a. Advance, retreat, advance, retreat, etc.

E. Mix commands

1. Instructor will call commands at his discretion
 - a. Advance, retreat, retreat, advance, advance, etc.
 - (1) Excellent check on balance

F. Visual commands

1. Instructor can give silent command by raising left foot for advance, right foot for retreat

IV. The Fourth Period

A. Review rope skipping, stance and footwork

B. Introduce left jab

1. Lecture
 - a. Purpose
 - b. Strategy
 - c. Execution
 - d. Telegraphing
2. Demonstrate
 - a. Co-ordinate jab and advance
 - b. Snap left hand back, do not drop
3. Combine jab with footwork in drills of previous day
 - a. Advance, extend left hand
 - b. Retreat, raise right hand for block
4. Drill to check correct footwork
 - a. Check advance, right foot clear of floor
 - b. Retreat, left foot clear of floor
 - c. Advance and retreat with both feet on floor

V. The Fifth Period

A. Review previous drills

1. Discuss and demonstrate

B. Shadow boxing

1. Discuss and demonstrate good form
2. Explain importance of mental concentration and association of movements and situations
 - a. Only few movements at first
 - b. Add new movement as fundamentals are introduced
3. Shadow boxing like rope skipping is a good warm up drill each day

C. Drill in pairs (no gloves yet)

1. Odd men jab and advance
2. Even men block and retreat
3. Reverse situation
 - a. Command, odds, advance, evens, advance, etc.
 - (1) Alternately
4. Drills are mixed by instructor
5. Telegraph drill
 - a. No command
 - (1) Even retreats only when he sees odd advancing
 - (2) Odd retreats only when even advances
 - (a) Men should not move automatically, should pause
 - (b) Drill should be done alternately

VI. The Sixth Period

A. Review

B. Gloves

1. Emphasize purpose, drill, not fight
2. March men to glove rack and return
3. Describe, demonstrate and practice distance
4. Position, odd man jabs, even holds ground and blocks
 - a. Reverse

VII. The Seventh Period

A. Review

B. Both men jab and block

1. Slow motion for duo-co-ordination
2. Later men should move about—change positions
 - a. Emphasize keeping eyes open and on opponent

VIII. The Eighth Period

A. Review

B. Straight right hand

1. Toe to toe—slow motion
 - a. No telegraph
 - b. Proper block
 - (1) By command

IX. The Ninth Period

A. Review

B. Explain elements of straight one-two

1. Eventually rapidity of blows important
 2. Isolated—individual drills at first
- ##### C. One Two
1. Jab
 - a. Pause to check weight and position
 2. Thrust right hand
 3. Defensive man blocks both blows with right

X. The Tenth Period

A. Review

B. Left Hook

1. Relative toe to toe position
2. Slow motion execution in close
3. Proper defense
4. Hook from distance
 - a. Check proper footwork

C. Box

1. Allow men to box one-minute round
 - a. Use only jab to head or solar plexus
 - b. Stress relaxation and hitting lightly

XI. The Eleventh Period

A. Review

B. Brief lecture of feinting

C. Hook to solar plexus

1. Demonstrate execution
2. Demonstrate defense
3. Practice right hand feint and hook to plexus
4. Practice left jab feint and hook to solar plexus

D. Allow men to box two-minute rounds—only left jab

XII. The Twelfth Period

A. Review

B. Explain counter punching

C. Explain and demonstrate parries

1. Parry inside with right
 - a. Counter with hook to head
 - b. Counter with hook to solar plexus
2. Parry outside with left
 - a. Counter with straight right to chin
 - b. Counter with straight right to body

D. Allow men to box three one-minute rounds—only jabs

XIII. The Thirteenth Period

A. Review

B. Slips

1. Outside slip with hook to head or



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- plexus
2. Inside slip with right cross to head or straight right to body
- C. Allow men to box one-minute rounds
1. Use jabs or hooks
- XIV. The Fourteenth Period
- A. Review
- B. Ducks
1. Duck left from left hook and counter with left hook to plexus
 2. Duck right from right hook and counter with right hook to plexus
- C. Allow men to box three one-half-minute rounds
1. Use jabs or hooks
- XV. The Fifteenth Period
- A. Review
- B. Explain delayed counter punching
- C. Roll from straight right and counter with right
- D. Step back from looping right hand and counter with right upper cut
1. Explain and demonstrate
 2. Give defense
 - a. Execute at slow motion
- E. Boxing
1. Box three one and one-half (1½) minute rounds
 2. Use jabs and hooks
 3. Stress relaxation, movement of position and light hitting
- XVI. The Sixteenth Period
- A. Review
- B. Step back from right and counter with right
- C. Step back from left hook and counter with left hook
- D. Box three one and one-half minute rounds lightly—jabs and hooks
- XVII. The Seventeenth Period
- A. Review
- B. Explain principle of beating man to punch
1. Beat man to punch with jab
 - a. Odd man telegraphs wide blow
 - b. Even man hits him first with jab
 2. Beat man to punch with right hand
 - a. Odd man leads wide telegraphed hook
 - b. Even man beats him with straight right to chin
 3. Right cross—review
- C. Box three two-minute rounds—jabs and hooks
- XVIII. The Eighteenth Period
- A. Review
- B. Short Range Boxing (Infighting)
1. How to protect
 2. How to score
- C. Box three two-minute rounds fast—jabs, hooks and right hands
- XIX. The Nineteenth Period
- A. General Review
- B. Explain principles of sustained attack
1. Review straight one-two to head
 2. Deliver a one, two, three to head
 - a. Defensive man retreats
 3. Feint right—deliver left hook to

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- plexus and right to chin
4. Feint jab to head—deliver right to body and hook to head
 - C. Box three two-minute rounds
 1. Change partners each round

XX. The Twentieth Period

- A. General Review
- B. Have men drill on tactics to use against left jab lead
- C. Have men drill on tactics to use

- D. Have men drill on tactics to use against a right hand lead
- E. Have men box four fast rounds with different opponents.

If You Want to Show Improvement, Pick the Distance or Middle Distance Runs

By Hermon Phillips

Track Coach, Purdue University

A RUN from a quarter mile to a mile and any run from two miles up, are considered middle distance and distance, respectively, by most track-minded people in the United States.

About seventy per cent of all prospective runners coming out for track for the first time, either in high school or college, report with the idea of becoming sprinters. Obviously, they feel that the sprints are easier and will require less training.

I am inclined to agree with this reasoning, but there are other factors that should not be overlooked. One is the evident fact that any would-be track man feels he is better able to make a good showing without training in the sprints than he would in the longer distances. Another factor which causes him to select the sprints is that, to most people sprints are more spectacular than the distances. These and other elements tend toward stimulating the desire for the inexperienced athlete to try out for the shorter and more spectacular runs.

Another reason which cause so many of our prospective track athletes to pick the shorter runs is that in preliminary training in the distance runs, they are more apt to notice that actually, their performances usually get worse before they begin to get better. The degree to which one becomes worse is not so noticeable in the sprints. Strange but true, it has been observed that in any sport where individual performance is concerned and where there is a way to measure performance, such as in track, the individual will really be less efficient in any given event after a short training period. This is apparently due to the fact that when a boy first comes out for a sport, he has built up a store of energy in the off-season. Then, when practice starts, he immediately uses the stored-up energy. He thus finds that, after a few days of practice, his performances are poorer than when he first came out for the sport. The muscles do not react as fast and lack the endurance which they possessed at the start of training. This is the time that the inexperienced boy says to himself and the coach, "What's the use of practice? I get worse rather than better!" If a boy in this frame of mind is not made to understand the reason for this reaction,

he may quit trying altogether, believing that he never will be a really good performer.

I am thoroughly convinced that no muscle or set of muscles will improve or develop unless we put a need for that development on the specific muscle or set of muscles used. Conditioning work at first is detrimental toward good performance. The athlete will not start to improve until he has re-co-ordinated those muscles. I always think of it in this way—the muscle or set of muscles after hard practices say to themselves, "If I don't start to get stronger, I can't exist under these conditions." The result is they begin to strengthen themselves in order to stand the extra work that is being thrust upon them. The same reasoning makes me believe that, if a boy begins to get tired under a given set of workouts or exercises, the best thing to do is to continue the work and not let up for a rest. If a let-up is tolerated, the good work already done may be lost. Obviously, the work should not be continued if there is danger of injury in any way.

This same reasoning may be used later in the season when a boy's performances seem to be getting worse rather than better. He again is going through the same process. As his muscles have improved after the first set-back, his performances have also improved. In turn, his workouts seem easier and he begins to work harder. The same process is repeated. The increased demands of the more intense work tends to repeat the initial conditioning process, so the need for greater development is again forced on the muscle. This continual re-conditioning process gradually levels off and the performances become more consistent. This is the cause of the ups and downs which an athlete experiences in his performances during a season. He may be on edge one week and down the curve the next.

If the coaches, especially the high school coaches, would keep their boys informed of this process, I believe there would be fewer boys becoming discouraged and quitting.

Generally speaking, noticeable improvement is much less likely to be observed in the sprints than in the distance events. I would like to express my ideas and reason-

ing for this.

First of all, no two people are alike; but they are all born with certain definite characteristics. Length of legs, bone structure, body size and the ability to react, etc., are not alike in any two people. I feel that some people are born with more inherited speed than others. Just as a race horse is born with certain inbred speed possibilities, so is man. If the trainer of a race horse is expecting a winner, in his selection of material to train, he will not select a draft horse. Neither should the boy or his coach expect to make a speed demon out of material comparable to the draft horse. Of course, there are always exceptions, but they are few.

No boy who cannot run a 100-yard dash in less than ten and eight tenths seconds during his early high school training is ever likely to run the hundred in less than ten seconds flat. In fact, I have never seen many who improved their natural speed to any great extent after they had matured physically. In other words, we are born with most of the speed capabilities that we have.

In distance and middle distance running, these same observations hold true to a lesser degree. To become a champion in the longer runs, natural inborn ability is a great asset but not so essential as in sprinting. Other factors, such as determination, mental attitude, ambition, work, and coaching will do more toward noticeable improvement.

By taking into consideration the things already mentioned, one can readily see why improvement can be recognized so much sooner in the longer or distance runs. To perform well in the middle distance events, I believe there are four main requirements that must be constantly worked on for improvement:

- (1) Proper balance, (2) Rhythm, (3) Relaxation, (4) Endurance.

It is easy to understand that in order to even stand up, it is necessary to have a sense of balance. In order to run, this sense must be even more highly developed. Rhythm is the essence of all movement. Some have practiced running with music to improve rhythm. The whole universe moves with rhythm and the smoother one's rhythm becomes, the easier the task.

Most waste motion is the result of poor rhythm. Relaxation is probably the most important thing that an athlete must learn to develop, as he who cannot relax is working against himself all the time. Our whole moving process is built around our ability to relax one set of muscles and tense another. If the one set of muscles only partly relaxes, then the work of the opposing muscles is made greater because it not only must work to cause movement, but must work to overcome the resistance of the partially relaxed opposing muscles. Any athlete must learn to relax if he is to become a champion. Endurance is the one requirement that can be most improved and the one in which the result of work can be seen most readily. Even a sprinter can be made into a distance runner if the desire to become a distance runner is present. Too often, laziness and the lack of understanding distance requirements make the dash man fearful of distance running.

I have often been asked, "What is the hardest event in track?" I always answer, "The longer the distance, the harder the event." This, I believe, will always hold true. The time required to recuperate from a distance run is greater than from a shorter run. This is assuming, of course, that the events are run in the same relative good times. The quarter mile or four-forty has been considered by many as the hardest event in our running races. This idea has been caused by people having witnessed so many poorly trained men in this race finish in an almost exhausted condition. This exhausted condition is often the result of poor judgment and conditioning on the part of the athlete.

The quarter mile is just short enough that many boys who are not in condition, try to run it practically "wide-open" all the way. When they have finished about three hundred and fifty yards, they begin to tire rapidly. At about three hundred and seventy-five yards to four hundred yards, their legs begin to buckle, but as they are so close to the finish by that time, they force themselves to continue; consequently, they finish entirely exhausted. This same condition usually does not happen in other races where the distance is greater and where better judgment is possible.

Marathon running and cross-country running are considered the real tests in the United States wherever distance running is done. Again the same theory works out. The longer the distance, the less inborn ability is required. The desire to compete and "intestinal fortitude" are the main traits needed.

Cross-country running has come into its own in recent years with a great number of high schools sponsoring it, either as a sport in itself, or as a conditioner for distance runners. I believe cross-country running is one of the best of all running

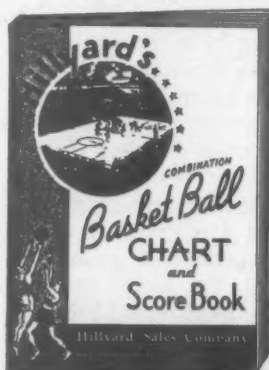
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THE ATHLETIC JOURNAL

6858 Glenwood Ave., Chicago 26, Illinois

sports. I have yet to see any bad results from participation of the normal runner in cross country. It is so out in the open and so away from any pressure from coach and spectators that the degree to which the competitor forces himself is entirely in his own hands. The competitor finds out that he is the "master of his own destiny" and that no one can help him.

There are no rules, except to cover a given course. There can be no substitutes. The runner must be on his own. The lessons learned should be worth while and

have a great amount of carry-over value, in other sports or to the game of life itself. We, as Americans, have always been taught the value of individual initiative, and in no way can a person find the true value of it better than in this fine sport. No two of us are made alike and it is good that we do not enjoy the same things. To me, it takes a person who likes running for the sake of running to enjoy cross country. There are no crowds to cheer a boy on, and there is not much publicity connected with cross-country events, but

there is the sheer joy of being able to know that you are alive enough to be able to move when the occasion demands, without the use of a motor-car.

If you are an athlete and do not have more than your share of natural ability and want to be a runner, and a possible champion, then pick the longer runs. If you are a coach and want your boys to make a good showing, then encourage them to do distance work where patience, determination and hard work pay dividends.

The Physiologic Effects of Blows to the Head

By W. W. Tuttle

University of Iowa

IN all types of sports, but especially in the contact sports, the participants are subject to blows on the head, which result in behavior changes varying from practically none to unconsciousness and even death. The dangers involved have been recognized and many precautionary measures and protective devices have been invented to lessen the impacts of blows to the head which are common in contact sports. The importance of head protection is very obvious, and should be insisted upon by every coach and trainer. Through the lessening of the force of head blows by means of protective devices, the deleterious result can be overcome in the majority of cases.

The wide variability of the effects resulting from blows to the head has prompted considerable investigation of the problem, and the underlying causes, and the variability of the results can be quite well explained at the present time. Back as far as 1874, papers were published based on researches dealing with concussion of the brain, and there have been numerous papers published since, dealing with the subject. Recently Joki¹ reviewed the literature adequately and added experimental observations of his own.

It is recognized that concussions caused by blows on the head are reversible and recoverable phenomena. However, they require medical attention under all circumstances, because if the concussion is severe enough, pathologic changes occur in the nervous system.

A large amount of the information provided for the explanation of the symptoms due to concussion has been secured from experiments on animals, especially dogs. Numerous methods have been employed to produce concussion of the brain artificially. Perhaps the best controlled method consisted of allowing a weight of 1220

grams to slide down a vertical iron bar suspended from the ceiling. By changing the distance through which the weight dropped, the force of the blow to the head of a dog could be calculated and controlled. By this method concussions, varying in intensity from very slight to very severe, could be produced.

It was found that when the head was struck a sharp blow, there was invariably an increase in intracranial pressure. The extent of the increase varied directly with the intensity of the blow, amounting on the average to three hundred millimeters of mercury which is approximately double the systolic blood pressure of the average dog. It was also observed that the increased intracranial pressure lasts for only a short time, the duration being not more than three-fifths of a second. In about one-half of the experimental animals it was observed that the blood pressure tended to fall after the blow had been delivered. Where there was a reaction of blood pressure to the blow, it amounted to a drop of as much as 33 per cent for systolic pressure and 25 per cent for diastolic pressure. The autopsies on the experimental animals, struck by the falling weight, showed clear spinal fluid, no hemorrhage and no lesions. The conclusions drawn were that a blow on the head causes intracranial pressure to greatly exceed systolic blood pressure at the time of the blow, and that following the blow some cases show a significant fall in both systolic and diastolic blood pressure.

In order to gain further information on the effects of concussion intracranial pressure was raised mechanically. This was done since it seemed certain that the symptoms which develop due to head blows are caused directly by the increase in intracranial pressure. This theory was formulated while studying the data on head blows. It was noted that when the intracranial pressure was raised above systolic

blood pressure, there was always a loss of consciousness, but as long as the intracranial pressure did not exceed systolic blood pressure there was no loss of consciousness.

Experimental data also bear out the hypothesis that loss of consciousness and intracranial pressure are very closely related. This is shown by the fact that if the intracranial pressure is experimentally maintained higher than systolic blood pressure for only one second, the average animal becomes unconscious and remains so for a period of five minutes. In some cases, the unconscious state is maintained for as long as ten minutes.

Experimental data show that the immediate result of a blow to the head is an increase in intracranial pressure and that the symptoms which develop depend upon the extent of the rise in intracranial pressure. As long as intracranial pressure does not exceed systolic blood pressure the victim remains conscious, but as soon as it exceeds systolic blood pressure, consciousness is lost.

It is also important to note that the experimental data on animals show that a blow on the head may cause concussion where the intracranial pressure is high enough to cause a loss of consciousness without the presence of intracranial hemorrhage or other pathologic alterations. The explanation of loss of consciousness without hemorrhage or pathological changes is that when the intracranial pressure exceeds arterial blood pressure severe cerebral anaemia (lack of blood) results.

It has also been observed that blows to the head result in post-concussion hyperglycemia (elevated blood sugar level). This phenomenon occurs regardless of whether or not the blows are severe enough to cause a loss of consciousness. Experiments have shown that the severity of the hyperglycemia varies directly with the severity of the concussion. This is

¹ Joki, Ernst. *The Medical Aspect of Boxing*. J. L. Van Schaik, Ltd., Publisher. 351 pp., 1941.

also true for the duration of the hyperglycemia. Observations on animals where the blows were not severe enough to cause unconsciousness, showed that half an hour after the blow, the blood sugar was 22 per cent above the fasting level and that this condition persisted for two hours. When the blows were severe enough to cause the animals to lose consciousness, the hyperglycemia amounted to 43 per cent above the normal level. In patients with concussion, hyperglycemia has been observed to persist for several days. That concussion causes hyperglycemia was discovered by Claude Bernard in 1855, when he showed that this condition was due to injury or trauma to the head which results in injury to a localized area in the brain.

It must be remembered that blows to the head, may cause injuries which are far more serious to the athlete than the resulting physiologic changes. It is quite conceivable that severe brain injury may occur without anything unusual being observed by the coach or trainer. The more severe blows to the head cause, in addition to a brief loss of consciousness, various types of amnesia (loss of memory). The mildest type of amnesia resulting from blows to the head is a sharp gap of memory beginning when the blow is struck and ending when consciousness is regained. A more severe type of amnesia occurs frequently in which the athlete does not remember the blow at all or the circumstances just preceding it. The most severe type of amnesia is characterized by a loss of memory beginning with the loss of consciousness and extending well past the time of apparent recovery. There are many cases on record where athletes performed what appeared to be normal behavior quite complex in nature without cerebration. This was proven by the fact that the athlete in question could not recall any of the events which took place, not even the impact of the blow.

The nature of the physiologic effects of blows on the head creates problem for the coach and the trainer. Obviously, an athlete who loses consciousness must be removed from a contest. The difficulty lies in appraising the extent of the injury. Even though the athlete gains consciousness, he may be suffering from brain hemorrhage, so mild in nature that there is no evidence against his resuming play. Also it is important to determine through conversation with the athlete that he is not suffering from severe amnesia, in which case his behavior may be unpredictable and dangerous.

In order to reduce the harmful effects of blows on the head, stress should be placed on adequate protection commensurate with performance. To avoid ill effects from what might seem to be harmless blows, everyone concerned should be on the alert so as to discover if the injured athlete suffers from obscure symptoms.

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The Sterling Township High School's Physical Education Department Meets the War Period Challenge

By *Homer B. Musgrove*

Athletic Director, Sterling, Illinois, High School

THREE years ago Sterling Township High School began to reorganize its physical education program to conform with the war needs. This newly accelerated program, designed to develop ruggedness and endurance, was no sooner put into working order than two of the three physical education instructors assigned to build and carry out the program were called into the service. Since only one instructor was available to carry the planned load, it was decided to offer the same material, stepping up the intensity of each hour of physical education by offering only two periods per week of one hour each to every student found physically fit to participate, either in full or in part, by our examining physicians. Supplementing this program of physical training, we required all freshmen to enroll for five hours per week of health classes and encouraged all the boys of Township to take some part in intramural sports. Tumbling and boxing were offered two nights per week, and intramural basketball, one night each week.

Out of necessity, our activities are practically all held indoors. War-time regulations made it necessary to abandon the use of our bus, and with it went our outdoor program. Prior to war-time regulations of this nature, each class was taken back and forth from our stadium, which is about a mile and a half from school. We have tried to improvise so that those activities that are ordinarily thought of as outdoor sports can be taught inside; that is, soccer, softball, hockey, and track.

Calisthenics, rope climbing, bar traversing, and running play a major roll in physical training at Township High School. About twenty to twenty-five minutes are spent each period on this type of work. Three years ago all male students at Township, after four months of strenuous training, were run through a series of seventeen tests. After the results were tabulated, it was found that our boys, like most American boys at that time, were average in their leg strength, but the majority were sadly lacking in arm—and

shoulder—girdle development. After a careful analysis of the results, it was decided to set up a series of calisthenic exercises which were to increase in load until the drills consumed approximately twenty minutes of a class period. At this point, instead of increasing the load for the rest of the year, we began gradually to accelerate the speed of the drills, thus keeping this phase of instruction from becoming too cumbersome and from encroaching upon the time set aside each hour for our sports and recreational program.

Arm circling, hand stands, push-ups, bar traversing, rope climbing, and chin-ups were incorporated into the drills which were administered to the classes, sometimes through the method of circle drill and other times through our regular calisthenic drills.

Games and Relays Aid Shoulder-Girdle Development

Games and relays were devised and employed, not only for their recreational values but for the purpose of arm—and shoulder—girdle development. In other words, planned work in the disguise of play made it possible in many instances to double the arm—and shoulder—girdle work, but keep it so that the boys still enjoyed the fun and recreation of play.

An explanation of a few of these games and relays which have proven very popular with the Township boys follows:

Football Push-Up Relay: Participants line up in two or more parallel lines. The leader in each line is given a football and instructed in the proper method of carrying it as well as passing and receiving it. The first man in each line must take his starting position behind a designated line. All exchanges of the ball must be made behind this line, with the ball being handed off, not thrown to the next runner.

At the starting signal, two boys from each line, the first of the two carrying the football, start for the basket at the far end of the basketball court. As soon as the free-throw line is reached, the boy

carrying the ball must try for the basket from this point. If he fails to make the basket, he retrieves the ball and may shoot again from anywhere on the court until he gets the ball through the hoop. In the meantime the number two man of the team, upon reaching the free-throw line, starts executing floor dips and continues to do so until his partner successfully throws a basket. As soon as the basket is made, the one doing the push-ups retrieves the ball and, running quickly back towards the starting line, hands it off the first of the next pair of performers, who carry on.

In order that each boy has a chance to be the shooter as well as the one who does the push-ups, it is necessary to run the relay twice, with the numbers one and two men exchanging places on the second round.

Wheelbarrow Hockey: Court—A basketball court with two chairs set up just outside of the free-throw lane and directly under the basket at each end of the court.

Ball—Soccerball, volleyball, or basketball.

Teams—Twelve or more players on each side plus a goal tender for each team.

Rules of the game—All the contestants must operate in pairs except the goal keepers, one being the wheelbarrow, the other the pusher. The two may change places anywhere on the court and as many times as they wish, but only the boy acting as the wheelbarrow can touch the ball. The goal keeper cannot leave the zone formed by the free-throw line, the rear semicircle of the free-throw circle, and the free-throw lane to the goal marked by the two chairs or other suitable standards.

The goal keeper must remain on his hands and feet when the ball is offensively in his half of the court, but can assume a sitting position at other times. The goal keeper staying in this restricted area must protect the goal, assuming this monkey-walk position and can slap, roll, or toss the ball back into the playing field while in this position.

All fouls, such as hitting the ball while

not in necessary position, are penalized by awarding the opponents the ball out of bounds.

Playing the Game—Teams take their position lined up across the middle of the court. The ball is placed in the center of the basketball jump circle. The two center wheelbarrow players take positions on their side of the center line, with hands just outside the jump circle. When the whistle blows starting the game, the centers can slap, roll, or push the ball toward one of their own players, or play it themselves towards the opponents' goal. The open hand must be used, not the fist. The ball can also be controlled by the head or shoulders, but in order to touch the ball at any time, the player must be in the regular wheelbarrow position.

Out-of-bounds balls, except those that are knocked out of bounds by the offense into the opponents' end zones, are put into play by rolling, slapping, or pushing the ball in bounds from the necessary wheelbarrow position. When the ball goes into the end zone, but not through the goal, and is last touched by an offensive player, the whistle should sound, halting play while players of both sides hurry across the center line in the middle of the court, where they again assume the wheelbarrow position. The goal keeper whose goal has previously been threatened places the ball on the free-throw line and, assuming a position on all fours, can slap, roll, or push the ball toward his opponents' goal and play is resumed.

After each successful goal, the teams line up again as at the start of the game.

Crab Walk Hockey: The game is played with the same rules and equipment as wheelbarrow hockey, only each player, including the goal keepers, assumes the crab-walk position. The ball can be kicked, pushed, rolled, or carried in one arm providing the player is in the crab-walk position with buttocks off the floor and at least one hand on the floor. It is permissible for any player to rest at any time by assuming a sitting position, but it is considered a foul and therefore an out-of-bounds ball for his opponents, if he touches the ball in any other position than in the required crab stance. In order to speed up the game, we have allowed the player who throws the ball in from out of bounds to take a deep squat position. From this position, he can roll, toss, or make a chest pass to his team mates. Immediately upon coming in bounds, this player again takes the crab-walk position.

Bar Traverse Relay: At Sterling Township, our shop department has installed two 35-foot, 2-inch steel pipes which are fastened to the front of the balcony, parallel to, and eight and nine feet respectively, from the gymnasium floor. These we used for chinning and bar traversing.

Two teams of equal numbers are lined up at opposite ends of the two bars. At the given signal, the first contestants in

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each team jump to the bar and traverse it as quickly as possible. Either a hand-over-hand method or a hand-to-hand method is permissible. If the player falls off before he completes the required performance, he must go back to the starting line and begin over. As the player reaches the end of the bar, he must chin himself once before dropping off. As soon as the first player has successfully completed his mission, the next player mounts and carries on. To add to the competitive spirit and to encourage greater speed, we have timed the various teams and posted the results.

Co-operation Through Correlation

The physical education program of Sterling Township High School, although stressing calisthenic drills, also finds time to offer to all students the fundamental skills of boxing, wrestling, badminton, volleyball, basketball, soccer, track, tumbling, trampolining, softball, touch football, and a variety of games.

Our sports and recreational program from September up until January 1945 has consisted of, besides our planned physical fitness drills, four weeks of softball fundamentals, five weeks of boxing skills, four weeks of basketball skills, one week of testing, six weeks of intramural tumbling and trampolining, and six weeks of intramural boxing; to date we have completed eight rounds of our six-team intra-

mural basketball league. Besides this, our department has offered to the public of Sterling a physical education demonstration held at the Sterling Coliseum, November 8, 1944, consisting of a calisthenic drill, rope climbing, tumbling, trampolining, and nine two-round boxing exhibitions.

Testing and Retesting

In order to determine the results of our planned program, we have retested each boy in his senior year, administering the same tests in the same way in which they were administered to the same boys in their sophomore year. Our program calls for identical tests during the freshman and senior years, but since this system has been in operation only three years, the sophomores have been retested in their senior year. Comparison of sophomore and senior averages of the tests completed to date are as follows:

SUMMARY SHEET OF AVERAGES

Test	Sophomore Year	Senior Year
Chins	7.28	11.50
Push-ups	19.44	28.80
Triple Jump	19'7"	22'1"
Squat Jump	42.30	48.12
Burpee	13.73	14.91
Sit-ups	102.73	118.00
10 Yd. Shuttle Run ..	35.59	37.55

Much help has been given the physical

education department at Township by the other departments of our school. Whenever possible, we try to correlate with the various other subjects. For example, our mathematics department provides several class periods each year to tabulate and compute test scores. Our physics teachers use examples of tumbling, rope climbing, trampolining, and track in explaining some of the many laws of physics which pertain to the above-mentioned activities.

Our coaches stress the necessity of our athletes participating whole-heartedly in our program, pointing out to each youngster the many ways he might be helped in the skills in which he is especially deficient.

Our health teachers and school nurse naturally work hand in hand with the actual physical part of the program, while our English department, through the members of the school newspaper and the members of the yearbook staff, many of whom are leaders in our physical education classes, manage to link the two departments.

Our administrative department comes into the picture through the recognition of physical education at Township on a par with other subjects in the school curriculum and by sanctioning and encouraging the co-operation of the various departments with the physical education and health group. Co-operation is our aim at Sterling Township, and success is its result.



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The Commercial Aspects of Intercollegiate Athletics

(Continued from page 18)

United States. Since that time people quite generally have come to believe that a college may accept money from wealthy individuals without losing its academic freedom. Perhaps in some instances, college presidents have had to cater to men of wealth and have been forced to follow certain procedures that were not entirely compatible with the highest ideals of an educational institution. At the same time the evils in this respect are more imaginary than real. Certainly so far as athletics are concerned there is less danger that 100,000 ticket purchasers might attempt to dictate athletic policies than there would be if a few wealthy men served as patrons and contributed the money necessary for the conduct and maintenance of the athletic departments.

What then is the basis for the frequent charge that college athletics have become commercialized? A study of the newspaper editorials, of the writings that have appeared in recent years in various publications, and of the addresses delivered before athletic and other educational associations reveals statements such as the following: "More people attended the Army-Navy football game in Chicago a few years ago than there are people living in the state of Nevada. The cost of the university stadium exceeds the cost of any of the other university buildings. The football receipts at a Yale-Harvard game constitute a larger sum of money than the endowment of a great many of the colleges. Football is big business." Whether college football has been commercialized or not, certain it is that a great many people believe this to be true. Consequently an analysis of the question is called for.

In the first place does the handling of large sums of money in connection with football games constitute a danger? President Faunce as previously reported suggested that the American people would never condemn any work or play because of its absorbing interest and it might be stated further that America will never condemn any enterprise because it is big or successful. The college instructor who finds it difficult to secure needed appropriations for laboratory equipment or books and who notes that the athletic department is supplied with the most up-to-date equipment quite naturally is animated by the very human quality of jealousy. There is, however, no rational reason why football should be condemned solely because of its commercial success. Otherwise, we would condemn the sports that are self-supporting because they are self-supporting and would extol those sports that are not self-supporting solely because they have not been successfully financed.

The next question that naturally arises has to do with the way in which the money is expended. Many cost analyses of football have been made in different sections of the United States. These studies reveal that some athletic associations have been prodigal with their money while others have made each dollar go as far as a dollar that is expended in the maintenance of any other college department. In most

of the colleges and universities the athletic receipts are handled and disbursed by the university treasurer, and the accounts are audited by the university auditing departments. If one would study the way in which the student annuals and yearbooks are financed and the way in which other student activities are conducted with the sanction and approval of the university authorities, one would have to agree that, comparatively speaking, college athletic moneys are administered wisely, judiciously, and honestly.

Some, however, have suggested that our colleges should not spend such tremendous sums of money for football when other departments of the college are sorely in need of financial assistance. Those who make this criticism, perhaps, believe that, if the people were not allowed to buy football tickets, each person who spends from two to twenty-five dollars a year for football tickets would spend the money, thus saved, for the support of other college departments. While it is true that a man cannot spend the same money for two different things, it is also doubtless true that many men have become interested in certain colleges because of the contact which they have made at the time of their visits in connection with the big games, and consequently they have later given of their wealth to endowment and other educational projects.

In recent years, some have suggested that, if college athletics are entitled to be considered as a part of the educational work being done by the university, the athletic department should be financed in the same manner in which the other departments are financed. When college athletics were started, the students who managed the enterprise were not able to get financial help from the college authorities, and consequently they were forced to depend upon the sale of tickets as a means of securing the needed funds. Since that time, college boards have been content to permit the athletic associations to finance their own activities and as yet there is no reason to believe that the trustees would be willing to appropriate enough endowment and taxation money to carry on the work of the athletic departments. Consequently, those who have been responsible for the administration of athletics, including the financing of the same, have been unwilling to cut off the sure source of revenue until some other plan is put into operation.

The charge that the football schedules are now made by managers, athletic directors, and football coaches with a view to the earning power of the games is frequently made. The fact is that those who made the schedules in the early days and those who are making the schedules today were, and are forced to give some consideration to this question of gate receipts. If it were true that large universities generally played only "money games," played their games on non-college grounds, and conducted football primarily for the money that might be earned, this criticism might be valid. It is true that a few of the colleges have laid themselves open to

this criticism, but this is not true of the great majority of the educational institutions. Most of the colleges are playing practically the same schedules today that they played twenty or thirty years ago. The 1929 football schedule for the University of Michigan was made up of games with Albion College, Mt. Union College, Michigan State, and the Universities of Purdue, Ohio State, Illinois, Harvard, Minnesota, and Iowa. Back in the early nineties Michigan played as many as twelve or thirteen games per season. Today only eight games are played each year. Michigan's football relationships with Harvard began in 1881 and with Minnesota, and Purdue in 1895. Ohio State was first played in 1897; Illinois and Michigan State in 1898, Albion College in 1899; the University of Iowa in 1900, and Mount Union College in 1913. Since the football earnings at the University of Michigan in 1929 exceeded those of any of the other Intercollegiate Conference universities one would naturally suspect that the Michigan schedule has been arranged with a view to possible gate receipts. The fact is, however, that Michigan in her exceedingly prosperous year played only teams that had previously been met.

Another fear often expressed is that a university with a large stadium will be forced to satisfy the demands of the large crowds and consequently illegitimate recruiting and subsidizing will result. While the most serious problem, with which the colleges today have to deal in connection with athletics, is that of illegitimate financial assistance given athletes, yet the following categorical statements are susceptible of proof. First, in the old days before the time of the big stadia, tramp athletes and others were given questionable assistance in larger degree than has been true since World War I which marks the period in which the majority of the large stadia have been erected. Second, the men who have been guilty of recruiting and subsidizing athletes in recent years in the large universities where football is self-supporting have, for the most part not been the men who have been responsible for the financial success of the games. Rather, groups of self-appointed recruiters and field agents have in the main been guilty of buying athletes. These men, attracted by the success that has attended college athletics in the larger institutions, and hoping to get some reflected glory from connection with a going concern have, in the main, been responsible for the recruiting situation. Generally speaking, university athletic departments with large student bodies from which to draw their varsity material, and with many trained athletes from high schools, enrolled in the colleges, have done less recruiting than is commonly supposed to be the case.

We think today of Venice, Genoa, Florence, Milan and other cities as centers of art, culture and learning, but we forgot that all of these cities were commercially prominent before they had won distinction in other lines. When the college athletic plants have been built and paid for, and when people generally have come to realize that it was with spectator money that the swimming pools, playfields and intramural athletics were financed, less criticism of the commercial side of college football will be heard.

INDEX TO ADVERTISERS

Athletic Institute, The.....	24, 25
Becton Dickinson Co.	28
Bike Web Mfg. Co.	21
Brooks Shoe Co.	39
Coca Cola Co.	Cover 3
Converse Rubber Co.	23
Dean, Everett	43
De Groat, H. S.	45
Denver Chemical Co.	46
Dolge Co., C. B.	45
Ederer Co., R. J.	43
Goldsmith	37
Griswold & Nissen.....	39
Hillerich & Bradsby Co.	33
Hillyard Co., The.....	41
Huntington Laboratories	Cover 2
Ivory System	Cover 4
Kahnfast Athletic Fabrics.....	26
Medart Mfg. Co., Fred.....	35
Mutual Life Insurance Company of New York, The...	30
National Sports Equipment Co.	45
Petersen & Co.	39
Rawley Company, The.....	3
Rawlings Mfg. Co.	27
Reach, Wright & Ditson.....	19
Riddell, Inc., John T.	31
Softball Tournaments	Cover 3
Spalding & Bros., A. G.	1
Toro Mfg. Co.	26
Voit Rubber Corp., W. J.	45
Wilson Sporting Goods Co.	29
Witchell-Sheill Co.	4



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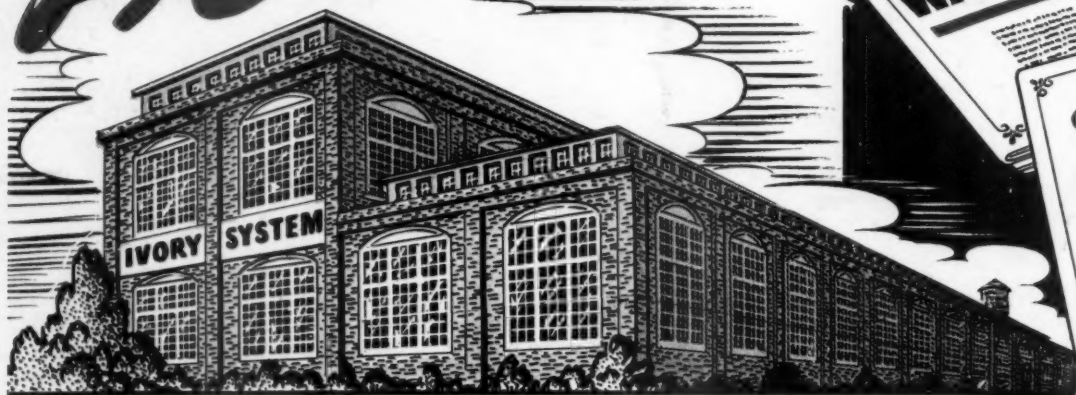
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